Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.03.96 Test oil : ISO 4113

Combination No. : 0 403 476 075

Injection pump

Pump designation : PES6MW100/720RS1130

EP type number : 0 413 406 122

Governor

Governer design. : RSV350...750MWOA336

: 4

Governer no. : 0 420 085 160

Cust. part No. :

Customer spec. information Customer : MB-NFZ Motor : OM366A Power KW : 84.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 2.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : + 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance	+ Check tolerance - cm3/1000s. : 6.0
cm3/1000s. : 6.0	
	CONTROL LEVER
	†
Rated speed rpm : 350	<pre>control lever position degree : 78.0 tolerance degree : + 4.0</pre>
Rack travel in mm: 6.30	totel and degree 4.5
Tolerance mm : +- 0.50	+ RATED SPEED
Del. quantity	†
cm3/1000 strokes : 11.0 Tolerance	+ rack travel mm : 1.00
cm3/1000 strokes : +- 2.0	+ Tolerance mm : + 0.70 + Rated speed rpm : 850
Check tolerance	T Nated speed Ipili . 030
cm3/1000s. : +- 4.5 Spreed	ASSEMBLY GOVERNOR SETTING
Tolerance	Rated speed rpm : 750
cm3/1000 strokes : 3.5	rack travel mm : 11.00
Check tolerance cm3/1000s. : 5.5	Dated aread area a 770
CIID7 (0003, ; 5.3	+ Rated speed rpm : 779 + Tolerance 1/min : + 4
	+ rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	†
	+ Rated speed rpm : 751 + rack travel mm : 11.00
	T rack travet mm : 11.00
GUIDE SLEEVE POSITION	Rated speed rpm : 780
	+ Tolerance 1/min : +- 4
anning! Inven	rask travel mm : 4.00
control lever position degree : - 3	Ī
Rated speed rpm : 800	Rated speed rpm : 752
	rack travel mm : 11.00
Rack travel in mm: 0.65	+
Tolerance mm : ← 0.35	+ Rated speed rpm : 781
governor spring	<pre> † Tolerance 1/min : ← 4</pre>
governor spring pre-tension	
governor spring pre-tension click setting x : 2.80	<pre> † Tolerance 1/min : ← 4</pre>
pre-tension	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753
pre-tension click setting x : 2.80	Tolerance 1/min : + 4 rack travel mm : 4.00
pre-tension	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00
pre-tension click setting x : 2.80 FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782
pre-tension click setting x : 2.80	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : -	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0 Tolerance	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754 rack travel mm : 11.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 1.0	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754
pre-tension click setting x : 2.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754 rack travel mm : 11.00 Rated speed rpm : 783
pre-tension click setting x : 2.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754 rack travel mm : 11.00 Rated speed rpm : 783 Tolerance 1/min : + 4
pre-tension click setting x : 2.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPs : - Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 753 rack travel mm : 11.00 Rated speed rpm : 782 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 754 rack travel mm : 11.00 Rated speed rpm : 783 Tolerance 1/min : + 4

rack travel mm : 11.00 Rated speed rpm : 784 Tolerance 1/min : +-4 rack travel mm 4.00 LOW IDLE control lever position degree : 65.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 350 rack travel mm : 6.30 : +- 0.50 Tolerance mm rack travel mm : Rated speed rpm : 2.00 390 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm : rack trave! mm : 700 12.05 : **←** 0.05 Tolerance mm Start interlock STARTING FUEL DELIVERY 100 Rated speed rpm : Del. quantity cm3/1000 strokes : 95.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. : +-8.0 LOW IDLE 350 Rated speed rpm : Del. quantity

Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000s. : 5.5

End of test specification sheet

cm3/1000 strokes : 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 23,04,97

Test oil

: ISO 4113

Combination No. : 0 400 466 096

Injection pump

Pump designation : PES6A75D410/3RS1326

EP type number : 0 410 476 977

Governor

Governer design. : RSV325...1400A8C742L

Governer no.

: 0 420 232 342

Cust. part No. :

Customer-spec. information

Customer

: KHD

Motor

: F6L912

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1 417 413 000

Inlet press. bar : 1.0

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 014

Outside diameter :

6.0

x inside diameter: 2.0

A04

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasina Tolerance : 0-60-120-180-240 : +- 0.50

Check

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 11.55 : +- 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 59.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000S.

: +-2.0

Spreed

Tolerance

cm3/1000 strokes :

2.0

Check tolerance

cm3/1000s.

3.5

Rated speed rpm : 325

Rack travel in mm: 8.10

Tolerance mm : + 0.10

Del. quantity		† tolerance degree	: +- 4.0
cm3/1000 strokes	: 11.0	+	
Tolerance		+ RATED SPEED	
cm3/1000 strokes	; - 3.0	→ rack travel mm	: 10.50
Check tolerance		+ Rated speed rpm	: 1445
cm3/1000s.	: +- 4.5	+ Tolerance 1/min	· + ' ' 5
CMD/ 10005.	. + 4.5	T loceratice trillin	
Spreed		T	
Tolerance		+ rack travel mm	
cm3/1000 strokes	: 2.0	+ Rated speed rpm	: 1485
Check tolerance		+ Tolerance 1/min	: +- 15
cm3/1000s.	: 3.0	+	
		+ rack travel mm	: 0.85
		+ Tolerance mm	: ← 0.55
(B) SETTING OF IN	LIECTION DUMD	Rated speed rpm	
	MECITON FOME	T Rated Speed rpm	: 1000
WITH GOVERNOR		†	4 00
		+ rack travel mm	: 4.00
		+ Rated speed rpm	: 1535
GUIDE SLEEVE TRAV	EL	+	
		1	
Dimension a mm	: 1.00	1	
VINCIDIO I G IMI		<u> </u>	
		T LOU TOLE	
011755 015515 5005	TTON	+ LOW IDLE	
GUIDE SLEEVE POSI	11014	†	
		+	
		+ control lever	
control lever		<pre>position degree</pre>	: 17.0
position degree	: - 3	+ tolerance degree	
Rated speed rpm	. Šenn	1	. ,,,,
Rated Speed Phil	. 000	T satisfact maint 11/21	+ 6,
- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.50	+ Setting point w/ou	it pumper spring
Rack travel in mm		†	705
Tolerance mm	: 0.20	+ Rated speed rpm	
		+ rack travel mm	: 8.60
governor spring		+ Tolerance mm	: ← 0.10
pre-tension		1	
click setting x	. 4.00	+ Testing:	
CCICK Secting x	. 4.00	resemy.	
		T Detect aread man	. 725
		+ Rated speed rpm	
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+ rack travel mm	: 8.10
		+ Tolerance mm	: ← 0.10
Rated speed rpm	: 1400	+	
Aneroid pressure		+ rack travel mm	: 2.00
hPa	• –	+ Rated speed rpm	: 675
Del. quantity	•	Tolerance 1/min	· + 30
	: 59.0	I locerative training	
cm3/1000 strokes	; 37.0	T	
Tolerance			······································
cm3/1000 strokes	: ← 0.5	+ TORQUE CONTROL	
Check tolerance		+	
cm3/1000s.	: +- 2.0	+ Rated speed rpm	: 1400
Spreed		rack travel mm	: 11.55
Tolerance		+ Tolerance mm	: ← 0.05
	. 20	10 cei di ice ium	0.05
cm3/1000 strokes	: 2.0	T passad amount and	. 500
Check tolerance		+ Rated speed rpm	: 500
cm3/1000s.	: 3.5	+ rack travel mm	: 12.55
		† Tolerance mm	: +- 0.05
		+	
		Rated speed rpm	: 800
CONTEON I EVED			
CONTROL LEVER		+ rack travel mm	: 12.20
	······································		
control lever		+ rack travel mm	: 12.20
	: 65.0	+ rack travel mm	: 12.20

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 008 Rated speed rpm :

Del. quantity cm3/1000 strokes : 52.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 2.5

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 325

Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : +- 4.5

Spreed

Tolerance cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 21.04.97

Test oil

Combination No. : 9 400 030 707FS

Injection pump Pump designation : EP type number

Governor

Governer design. : RQV400...1250AB1320R

Governer no.

: F 002 A30 000

Cust. part No. : TATA-CUMMINS

Customer-spec. information Customer : CUMMINS

Motor

: 6BT - 145 BHP

TEST BENCH REQUIREMENTS

Inlet line

: 3.2;

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 9 451 037 430

Inlet press. bar :

2.0

Tolerance bar : \leftarrow 0.1

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 014

Outside diameter : 6.0

x inside diameter : : 2.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm 3.10

Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 6.00

Tolerance : + 0.10

Check

tolerance "NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 12.20

Tolerance mm : + 0.05

Rack travel in mm: 8.45 Tolerance mm: +- 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1347	tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.20 Rated speed rpm : 1325 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1455 Tolerance 1/min : + 15 rack travel mm : 0.50
guide sleeve travel mm : 8.48 Tolerance mm : +- 0.15 Rated speed rpm : 400	Tolerance mm : +- 0.50 Rated speed rpm : 1525
guide sleeve travel mm : 1.71 Tolerance mm : + 0.20	LOW IDLE
Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499	control lever position degree : 20.0 tolerance degree : + 4.0 Testing:
guide sleeve travel mm : 2.75 Tolerance mm : + 0.25	Rated speed rpm : 400 rack travel mm : 8.45 Tolerance mm : +- 0.10
Rated speed rpm : 549 guide sleeve travel mm : 3.30 Tolerance mm : + 0.25 Rated speed rpm : 560	rack travel mm : 2.00 Rated speed rpm : 760 Tolerance 1/min : + 30 Rated speed rpm : 100
guide sleeve travel mm : 3.37 Tolerance mm : + 0.25	CRT mm min. :> 9.00
Rated speed rpm : 1620 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50	TORQUE CONTROL Rated speed rpm : 750 rack travel mm : 12.20 Tolerance mm : + 0.05
GUIDE SLEEVE POSITION	Rated speed rpm : 1250
Rated speed rpm : 1250 Rack travel in mm : 16.00 Tolerance mm : + 1.30	ANEROID/ALTITUDE COMPENSATOR TEST
	SETTING Rated speed rpm : 550
CONTROL LEVER -	Pressure hPa : 750 Tolerance mm : +- 0.05
position degree : 63.0	Pressure hPa : -

Rated speed rpm : 550 rack travel mm : 11.25 Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 550

Pressure hPa : 445
rack travel mm : 11.95
Tolerance mm : + 0.20

Pressure hPa : 390
rack travel mm : 11.60
Tolerance mm : + 0.20

Start interlock

Rated speed rpm : > 120 Rated speed rpm : < 300

Check

speed 1/min : > 100

Check

speed 1/min : < 340

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 15.50 Toterance mm : + 0.50

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.04.97 : ISO 4113

Combination No. : F 002 AOZ 056

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0c935R

Governer no. : F 002 A20 240

Cust. part No. : DEP: 328 3856

Customer-spec. information Customer : CUMMINS

Motor

: 6BT - 148 HP

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 7.00

: +- 0.10 Tolerance

Check

tolerance °NW : - 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.80

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 106.5

Tolerance	+	Tolerance
cm3/1000 strokes	: + 1.0 ¹	cm3/1000 strokes : +- 1.0
	1	Check tolerance
Check tolerance		
		cm3/1000s. : +- 3.0
cm3/1000s.	: + 3.0 +	Spreed
	<u> </u>	Tolerance
Spreed		cm3/1000 strokes : 4.0
(* * 2 2 2	1	Check tolerance
Tolerance	i	7/40004
cm3/1000 strokes	: 4.0	cm3/1000S. : 6.5
CIID/ 1000 Strokes	: 4.0 †	
Check tolerance	+	
cm3/1000s.	: 6.5	CONTROL LEVER
	+	
		control lever
	1	position degree : 103.0
Rated speed rpm	: 475	
rated speed rpm	: 475	tolerance degree : +- 4.0
	t	
Rack travel in mm		RATED SPEED
Tolerance mm	: ← 0.10 +	rack travel mm : 11.80
Del, quantity	1	Rated speed rpm : 1150
cm3/1000 strokes	: 15.0	Tolerance 1/min : +- 5
Tolerance	T	TO COT GITTED IN THE TOTAL OF T
cm3/1000 strokes	: + 2.0	mode through we / 00
	: + 2.0 +	rack travel mm : 4.00
Check tolerance	<u> </u>	Rated speed rpm : 1250
cm3/1000s.	: + 4.5 +	Tolerance 1/min : +- 5
Spreed	+	
Tolerance	1	rack travel mm : 0.85
cm3/1000 strokes	: 6.0	Tolerance mm : +- 0.55
Check tolerance	. 0.0	
	T	Rated speed rpm : 1370
cm3/1000s.	: 8.0 +	
	+	rack travel mm : 4.00
	+	Rated speed rpm : 1255
(B) SETTING OF IN	JECTION PUMP +	•
WITH GOVERNOR	1	
	1	
		LOW IDLE
GUIDE SLEEVE POSI	TTON	LOW IDEC
GOIDE SEEENE LOST	11014	
	T	
	t	control lever
control lever	+	position degree : 82.0
position degree	: FREE +	tolerance degree : +- 4.0
Rated speed rpm		-
	1	Setting point w/out bumper spring
Rack travel in mm	. nsn <u>1</u>	
		Poted aroud ann - 175
Tolerance mm	; — U.2U †	Rated speed rpm : 475
	+	rack travel mm : 4.90
governor spring	+	Tolerance mm : + 0.10
pre-tension	+	
click setting x	: 5.00	Testing:
	1	
		Rated speed rpm : 475
FILL LOAD DELTUED	V AT ELLI LOAD STOP	
FOLL LUAD DELIVER	Y AT FULL LOAD STOP +	rack travel mm : 5.40
	+	Tolerance mm : + 0.10
Rated speed rpm	: 1100 +	
Aneroid pressure	1	rack travel mm : 2.00
hPa	: 1000	Rated speed rpm : 560
Del. quantity	1	Tolerance 1/min : +- 30
cm3/1000 strokes	: 106.5	rocerdince in min , re 30
	: 1115) ++	

Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm 1100 rack travel mm 12.80 Tolerance mm : + 0.05 800 Rated speed rpm 13.10 rack travel mm Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm 1000 Pressure hPa Pressure hPa 500 Rated speed rpm rack travel mm 9.80 Tolerance mm : + 0.10**MEASUREMENT** 500 Rated speed rpm Pressure hPa 700 rack travel mm 12.45 Tolerance mm : + 0.20Pressure hPa 560 11.95 rack travel mm Tolerance mm : +- 0.20 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1000 hPa 800 Rated speed rpm

Del. quantity

cm3/1000 strokes : 111.4

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Aneroid pressure

hPa : -

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 70.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 475
Del. quantity

cm3/1000 strokes : 15.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

 $c_{3}/1000s$. : +- 4.5

Spreed Tolerance

cm3/1000 strokes : 6.0

Chack tolerance

cm3/1000s : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.04.97 Edition Test oil : ISO 4113

Combination No. : 0 402 034 700

Injection pump

Pump designation: PES4P120B120RS3379

EP type number : 0 412 024 702

Governor

Governer design. : RQV475...1100PA1314K

Governer no. : 0 421 815 543

Cust. part No. : 3928601

Customer-spec, information Customer : CDC Motor : 4BTA-A Power KW : 93.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

: 2 417 413 093 Overflow valve

Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : Tolerance mm : + 3.60 : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : **←** 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.55

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 142.0

	+ Rated speed rpm : 1660
Tolerance	+ Rated speed rpm : 1660 + guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 13.50
	+ Tolerance mm : +- 0.50
Check tolerance cm3/1000s. ; +- 4.0	†
Cm5/10005, ; +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+
	+ Rated speed rpm : 1100
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1200 + Del. quantity
Check tolerance	+ cm3/1000 strokes : 142.0
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : + 1.0
•	+ Check tolerance + cm3/1000s. : +- 4.0
Rated speed rpm : 475	+ Spreed
	+ Tolerance
Rack travel in mm : 6.10	+ cm3/1000 strokes : 8.0
Tolerance mm : +- 0.10	Check tolerance
Del. quantity cm3/1000 strokes : 31.0	cm3/1000s. : 12.0
Tolerance	
cm3/1000 strokes : +- 3.0	
Check tolerance	+ CONTROL LEVER
cm3/1000s. : +- 5.0 Spreed	t control lever
Tolerance	+ position degree : 111.0
cm3/1000 strokes : 4.0	tolerance degree : + 4.0
Check tolerance	+
cm3/1000S. : 8.0	RATED SPEED 10.50
	+ rack travel mm : 10.50 + Rated speed rpm : 1155
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 15
WITH GOVERNOR	+
	rack travel mm : 6.60
GUIDE SLEEVE TRAVEL	+ Rated speed rpm : 1230 + Tolerance 1/min : + 5
WASTE TELEFOL THITTEE	+
Rated speed rpm : 1163	+ rack travel mm : 0.50
guide sleeve travel mm : 7.66	Tolerance mm : + 0.50
travel mm : 7.66 Tolerance mm : +- 0.15	Rated speed rpm : 1350
	+
Rated speed rpm : 475	+
guide sleeve travel mm : 1.59	LOU TOLE
Tolerance mm : +- 0.20	LOW IDLE
	+
Rated speed rpm : 931	+ control lever
<pre>guide sleeve travel mm : 5.89</pre>	+ position degree : 70.0 + tolerance degree : + 4.0
travel mm : 5.89 Tolerance mm : +- 0.25	toterance degree : +- 4.0
	Control lever difference
Rated speed rpm : 670	+ Grad : 43.0
guide sleeve travel mm : 3.53	tolerance degree : +- 6.0
Tolerance mm : +- 0.25	T Testing:
	1

Rated speed rpm rack travel mm Tolerance mm	: 475 : 6.10 : + 0.10	theck speed 1/min : < 425
Rated speed rpm	: 400	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 7.60	Aneroid pressure hPa : 1200
Rated speed rpm	: 550	Rated speed rpm : 750 Del. quantity
TORQUE CONTROL		
Rated speed rpm	: 1100	cm3/1000 strokes : +- 3.0 Check tolerance
rack travel mm Tolerance mm	: + 0.05	+ cm3/1000s. : +- 6.0 + Spreed + Tolerance
Rated speed rpm rack travel mm	: 750 : 11.40	cm3/1000 strokes : 8.0 Check tolerance
rack travel mm Tolerance mm		cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	: 550 : 11.00	Aneroid pressure hPa : -
Tolerance mm	: +- 0.20	Rated speed rpm : 1100 + Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		Tolerance + cm3/1000 strokes : + 1.0
SETTING		+ Check tolerance + cm3/1000s. : + 3.0
		-
Rated speed rpm Pressure hPa	: 1100 : 1200	STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm rack travel ma Tolerance mm	: 9.60	Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : + 0.50 Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 169.0 + Tolerance + cm3/1000 strokes : +- 20.0
Rated speed rpm		+ Check tolerance + cm3/1000s. : +- 25.0
Pressure hPa rack travel mm Tolerance mm	: 765 : 11.00 : + 0.20	<u> </u>
Pressure NPa rack travel mm Tolerance mm	: 10.00	LOW IDLE Rated speed rpm : 475
Start interlock		Del. quantity cm3/1000 strokes : 31.0
Rated speed rpm Rated speed rpm		Tolerance + cm3/1000 strokes : +- 3.0 + Check tolerance
Check		+ cm3/1000s. : + 5.0 + Spreed
speed 1/min	: > 80	+ Tolerance + cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.	:	8.0	
			

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 23.04.97 Test oil : ISO 4113

Combination No. : 9 400 030 739

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1250A0C852R

Governer no. : 9 420 034 718

Cust. part No. : 3929403

Customer spec. information Customer : CDC Motor : 6BT Power KW : 114.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 993

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

"NW after s.o.d. : 7.00 Tolerance : + 0.50

Tolerance : + 0.50 Check

uneck

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 11.75

Tolerance mm : \leftarrow 0.05

Del. quantity	+ Tolerance
cm3/1000 strokes : 102.0	+ cm3/1000 strokes : + 1.0
	+ Check tolerance
Tolerance	+ cm3/1000s. : + 3.0
cm3/1000 strokes : +- 1.0	Spreed
	Tolerance
Check tolerance	+ cm3/1000 strokes : 3.5
cm3/1000s. : + 3.0	Check tolerance
• • • • • • • • • • • • • • • • • • •	+ cm3/1000s. : 6.0
Spreed	T (1113/10003 0.0
opieca	I
Tolerance	
cm3/1000 strokes : 3.5	CONTROL LEVER
11107 1000 301 ORCS . 3.3	I CONTROL CEVER
Check tolerance	T control lever
cm3/1000s. : 6.0	
CIID/ 10003 0.0	position degree : 115.0
	T DATES OPERS
	+ RATED SPEED
Dated aread non 1 /75	+ rack travel mm : 10.70
Rated speed rpm : 475	+ Rated speed rpm : 1320
Donale share and the second of F. F.O.	† Tolerance 1/min : + 5
Rack travel in mm: 5.50	†
Tolerance mm : + 0.10	+ rack travel mm : 7.50
Del. quantity	+ Rated speed rpm : 1365
cm3/1000 strokes : 21.5	+ Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : → 2.0	+ rack travel nm : 0.35
Check tolerance	+ Tolerance mm : + 0.55
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1450
Spreed	+
Tolerance	+ rack travel mm : 7.50
cm3/1000 strokes : 3.5	+ Rated speed rpm : 1365
Check tolerance	_
cm3/1000s. : 5.5	1
	1
(B) SETTING OF INJECTION PUMP	+ LOW IDLE
WITH GOVERNOR	+
	1
	control lever
	position degree : 87.0
GUIDE SLEEVE POSITION	
TWOTE THESE I TWO IS THE	- Control lever difference
Rated speed rpm : 800	+ Grad : 28.0
יישקט בטט י איין יי שטטיים בטיים ביי	+ tolerance degree : + 4.0
Rack travel in mm: 0.50	1 1000 409100 1 110
Tolerance mm : +- 0.20	Setting point w/out bumper spring
	Toocenia boune avode oquiber abi mia
governor spring	Rated speed rpm : 475
pre-tension	rack travel mm : 5.00
click setting x : 5.00	Tolerance mm : +- 0.10
crick secting x . J.00	T Total article initi
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	T resume.
TOTE FOUND RESTABLISH LAST FOUND STOR	Rated speed rpm : 475
Pated aroad page + 1250	
Rated speed rpm : 1250	+ rack travel mm : 5.50
Aneroid pressure	+ Tolerance mm : + 0.10
hPa : 900	T
Del. quantity	+ rack travel mm : > 2.00
cm3/1000 strokes : 102.0	+ Rated speed rpm : 580

Tolerance 1/min ; +-30 Rated speed rpm 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm 1250 rack travel mm 11.75 Tolerance mm : +- 0.05 Rated speed rpm 800 rack travel mm 11.90 : +- 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rom 800 Pressure hPa 900 : Pressure hPa 800 Rated speed rpm rack travel mm 11.00 Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm 800 620 Pressure hPa rack travel mm 11.65 Tolerance mm : +- 0.20 Pressure hPa : 565 rack travel mm 11.30 Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 900 Rated speed rpm 800

hPa Rated speed rpm 800 Del. quantity cm3/1000 strokes : 97.5 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : + 0.50Del. quantity cm3/1000 strokes : 120.5 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : +- 15.0 LOW IDLE 475 Rated speed rpm : Del. quantity cm3/1000 strokes : 21.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s.4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Aneroid pressure

End of test specification sheet

Del. quantity

Check tolerance cm3/1000s.

Tolerance

cm3/1000 strokes :

cm3/1000 strokes : +-

108.0

: +-

2.0

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18,04,97 Edition Test oil : 18.04.97

Combination No. : 9 400 030 750

Injection pump

Pump designation : PES4A95D32O/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1050A0C865R

Governer no. : F 002 A20 201

Cust, part No. : 3930156

Customer-spec. information Customer : CDC Motor : 4BT3.9 Power KW 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 : +- 0.50 Phasing

Tolerance

Check

tolerance *NW : \div 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.30 Tolerance mm: + 0.05

Del. quantity cm3/1000 strokes : 115.0	- Aneroid pressure - hPa : 1200 - Del. quantity
Tolerance cm3/1000 strokes : + 1.0	- cm3/1000 strokes : 115.0 - Tolerance
Check tolerance cm3/1000s. : + 3.0	- cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 3.0
Spreed	- Spreed - Tolerance
Tolerance cm3/1000 strokes : 4.0	- cm3/1000 strokes : 4.0 - Check tolerance - cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	-
	- CONTROL LEVER
Rated speed rpm : 475	- control lever - position degree : 100.5 - tolerance degree : +- 4.0
Rack travel in mm: 6.25	- - RATED SPEED
Del. quantity	rack travel mm : 12.30
cm3/1000 strokes : 22.0	- Rated speed rpm : 1110 - Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	•
Check tolerance cm3/1000s. : + 4.5 Spreed	- rack travel mm : 4.00 - Rated speed rpm : 1205 - Tolerance 1/min : +- 5
Tolerance + 6.0 + 6.0	- - rack travel mm : 0.85
Check tolerance	- Tolerance mm : +- 0.55
cm3/1000s. : 8.0	- Rated speed rpm : 1260 -
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- rack travel mm : 4.00 - Rated speed rpm : 1210 -
GUIDE SLEEVE POSITION	- LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	- control lever - position degree : 80.0 - tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	- Control lever difference - Grad : 20.5 - tolerance degree : +- 6.0
governor spring	-
pre-tension + click setting x : 2.50 +	- Setting point w/out bumper spring -
	- Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	- rack travel mm : 5.75 - Tolerance mm : +- 0.10
Rated speed rpm : 1050	- - Testing: -

Rated speed rpm		+ Check tolerance	
rack travel mm Tolerance mm		cm3/1000s.	: +- 4.0
		+ Aneroid pressure	
Rated speed rpm	: 100	+ hPa	: - : 800
CRT mm min.	; > 19.00	Rated speed rpm Del. quantity	: 800
	, , , , , , , , , , , , , , , , , , , ,	+ cm3/1000 strokes	: 84.0
TOPOLIE CONTROL		+ Tolerance	: +- 1.0
TORQUE CONTROL		+ cm3/1000 strokes + Check tolerance	: +- 1.0
Rated speed rpm	: 1050_	- cm3/1000s.	: ← 3.0
rack travel mm Tolerance mm	: 13.30 : +- 0.05	İ	
tocel diffe this		<u> </u>	
Rated speed rpm	: 750	STARTING FUEL DEL	IVERY
rack travel mm Tolerance mm	: 14.30 : + 0.10	+ Rated speed rpm	: 100
TOCCT QUICE HER	. , 0.10	- rack travel mm	• 20.50
		Tolerance mm	: +- 0.50
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes	: 121.5
CONFERENCE TEST		Tolerance	. 121.3
		+ cm3/1000 strokes	: +- 10.0
SETTING		+ Check tolerance + cm3/1000s.	: + 15.0
Rated speed rpm	: 800	+ Chb/ 10003:	15.0
Pressure hPa	: 1200	+	
Pressure hPa	<u>. – </u>	I	
Rated speed rpm	: 800	+ LOW IDLE	
rack travel mm Tolerance mm	: 11.00	† Dated aread re-	: 475
rocerance min	. + 0.10	+ Rated speed rpm + Del. quantity	: 475
MEASUREMENT		+ cm3/1000 strokes	: 22.0
Rated speed rpm	: 800	+ Tolerance + cm3/1000 strokes	: +- 2.0
Naced Speed pill	. 000	Check tolerance	2.0
Pressure hPa	: 650	+ cm3/1000s.	: +- 4.5
rack travel mm Tolerance mm	: 12.65 : + 0.20	+ Spreed + Tolerance	
rocci arioc imi		+ cm3/1000 strokes	: 6.0
Pressure hPa	: 550	+ Check tolerance	
rack travel mm Tolerance mm	: 11.90 : +- 0.20	+ cm3/1000s.	: 8.0
	,	†	
Start interlock		İ	
		+	
FUEL DELIVERY CHA	ARACTERISTICS	+ End of test spec	ification sheet
Aneroid pressure		‡	
hPa	: 1200	+	
Rated speed rpm	: 750	†	
Del. quantity cm3/1000 strokes	: 129.0	I	
Tolerance		+	

Tolerance cm3/1000 strokes : + 2.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 18.04.97 Test oil : ISO 4113

Combination No. : 0 400 074 884

Injection pump

Pump designation : PES4M55C32ORS184 EP type number : 0 410 054 938

Governor

Governer design. : RSF375/1900M77 Governer no. : 0 420 021 273

Cust. part No. :

Customer—spec. information Customer : MB-PKW Motor : 0M601-2.3L

Power KW : 58.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. *C : 40
Toleranca *C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 16.50 Tolerance : + 0.20

Check

tolerance "NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.35 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 39.4

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance cm3/1000s. : +- 1.5

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. 3.0 SET IDLE CONTROL LEVER POSITION Rated speed rpm 375 Rated speed rpm 1000 4,70 Rack travel in mm : : ← 0.10 Tolerance mm CRT mm max. 1.45 Del. quantity cm3/1000 strokes : 6.5 Tolerance LOW IDLE cm3/1000 strokes : +-0.5 Spreed Tolerance control lever cm3/1000 strokes : 1.0 position degree : 14.0 tolerance degree : +-2.0 (B) SETTING OF INJECTION PUMP Setting point w/out bumper spring WITH GOVERNOR Rated speed rpm : 375 rack travel mm 4.70 IDLE STAGE SET IDLE AUXILIARY SPRING Rated speed rpm Rack travel in mm : rack travel mm 6.25 3.40 Tolerance mm : + 0.25 : + 0.10Tolerance mm Load pick-up FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm 250 Rated speed rpm 1000 rack travel mm : > 10.20 Ref. pressure ALDA / ADA hPa 1100 Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 39.4 CRT mm max. 1.45 Tolerance cm3/1000 strokes : +-4.70 0.5 rack travel mm Check tolerance Rated speed rpm 375 cm3/1000s. 1.5 Spreed Tolerance cm3/1000 strokes : 2.5 TORQUE CONTROL Check tolerance cm3/1000S. 3.0 Rated speed rpm 1000 rack travel mm 12.35 Tolerance mm : + 0.05RATED SPEED Rated speed rpm 1850 rack travel mm 12.30 control lever Tolerance inn : + 0.10 : 50.0 position degree Rated speed rpm 2200 ADJUSTMENT TEST ADA/ALDA : rack travel mm 5.60 : + 0.25Tolerance mm SETTING 2400 Rated speed rpm Rated speed rpm 1000 rack travel mm 0.50 Ref. pressure Tolerance mm : *- 0.50 ALDA / ADA hPa 940 rack travel mm -0.10

Tolerance mm

: + 0.10

SAPE & CO. LOS PERSONA LOS	-	Del. quantity
MEASUREMENT	-	cm3/1000 strokes : 59.8
Rated speed rpm	• 1000	Tolerance cm3/1000 strokes : +- 4.0
Ref. pressure	. 1000	Check tolerance
ALDA / ADA hPa	: 900 -	cm3/1000s. : +- 5.0
rack travel mm		- Spreed
Tolerance mm	: ← 0.10 -	Tolerance
Doff phononium	-	cm3/1000 strokes : 6.0
Ref. pressure ALDA / ADA hPa	: 750	Check tolerance : 6.0
rack travel mm		. 0.0
Tolerance mm	: +- 0.20	1
	•	+
	-	101 701 5
FUEL DELIVERY CHA	ADACTEDISTICS	LOW IDLE
TOLE DELIVERT CHA	WAC LEWIS 1100	Rated speed rpm : 375
Ref. pressure	-	Del. quantity
ALDA / ADA hPa		cm3/1000 strokes : 7.8
Rated speed rpm	: 1850	Check tolerance
Del. quantity cm3/1000 strokes		cm3/1000s. : +- 2.3
Tolerance	: 42.0	- Spreed - Check tolerance
cm3/1000 strokes	: + 1.0	cm3/1000s. : 1.5
Check tolerance	-	+
cm3/10003.	: + 2.0	+
Spreed	-	
Tolerance cm3/1000 strokes	: 2.5	Ī
Check tolerance	. 2.0	
cm3/1000s.	: 3.0	control lever
	-	position degree : > 47.00
	•	
HIGH IDLE		t control lever
HIGH INCL	•	position degree : < 44.50
Ref. pressure	-	+
ALDA / ADA hPa	: 1100	
Rated speed rpm		SETTING PNEUMATIC FAST IDLE (PLA)
rack travel mm	: 5.60 - : + 0.25 -	(PLA) POSITION
Tolerance mm Del. quantity	: +- 0.25	
cm3/1000 strokes	: 16.0	control lever
Tolerance	-	position degree : 14.0
cm3/1000 strokes	: +- 2.0	tolerance degree : +- 2.0
Check tolerance		Detail and discount /25
cm3/1000s. Spreed	: + 3.0	Rated speed rpm : 425
Tolerance	-	Rack travel in mm : 7.00
cm3/1000 strokes	: 2.5	Tolerance mm : + 0.80
Check tolerance	•	Del. quantity
cm3/1000s.	: 3.0	cm3/1000 strokes : 15.3
		Tolerance : +- 3.5
STARTING FUEL DEL	TVFRY	Check tolerance
TIME TO THE PLE		cm3/1000s. : +- 4.5
Rated speed rpm		Vacuum hPa : 450.0
rack travel mm	: > 20.10	†
	•	-

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 375 Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.04.97 Test oil : ISO 4113

Combination No. : 0 402 076 802

Injection pump

Pump designation : PES6P120A1320/5RS337

: 3

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1385930

Customer-spec. information

Customer : SCANIA Motor : DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : + 0.30 Phasing Tolerance

Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : **←** 0.30

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 15.35	
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Not work?	Parker I
Del. quantity + cm3/1000 strokes : 226.0 +	Rated speed rpm : 700 Aneroid pressure
CIIDY 1000 SET ORES . LEO.	hPa : 1500
Tolerance	Del. quantity
cm3/1000 strokes : +- 1.0 +	cm3/1000 strokes : 226.0
Check tolerance	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 7.0	Check tolerance
	cm3/1000s. : + 7.0
Spreed	Spreed
Telemone	Tolerance
Tolerance + cm3/1000 strokes : 8.0 +	cm3/1000 strokes : 8.0 Check tolerance
this root strokes . O.b	cm3/1000s. : 12.0
Check tolerance	
cm3/1000s. : 12.0 +	
A paper de la Contraction de L	CONTROL LEVER
Ī	CONTROL LEVER
Rated speed rpm : 350	control lever
+	position degree : 54.0
Rack travel in mm: 5.10	tolerance degree : \leftarrow 4.0
Tolerance mm : + 0.10 + Del. quantity +	control lever
cm3/1000 strokes : 18.0	position degree : 104.0
Tolerance	tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0 +	
Check tolerance + 6.0 +	RATED SPEED rack travel mm : 14.30
cm3/1000s. : + 6.0 + Spreed +	rack travel mm : 14.30 Rated speed rpm : 1095
Tolerance +	Tolerance 1/min : + 5
cm3/1000 strokes : 4.0	Check
Check tolerance	speed 1/min : + 10
cm3/1000s. : 8.0	rack travel mm : 4.00
Ţ	Rated speed rpm : 1195
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 15
WITH GOVERNOR +	Check
†	speed 1/min : + 2i)
	rack travel mm : 0.85
GUIDE SLEEVE POSITION	Tolerance mm : + 0.55
+	Rated speed rpm : 1350
the second secon	7 00
control lever + position degree : -3 +	rack travel mm : 4.00 Rated speed rpm : 1215
Rated speed rpm : 800	Nated Speed (bill : 1213
+	
Rack travel in mm: 0.50	
Tolerance mm : +- 0.20	LOW IDLE
governor spring	FOM TOFE
pre-tension +	
click setting x : 6.00	control lever
†	position degree : 73.0
+	tolerance degree : +- 4.0

control lever

position degree : 23.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 4.60 Tolerance mm : + 0.10

Testing:

Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 555
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 15.35 Tolerance mm : +- 0.05

Rated speed rpm : 1050 rack travel mm : 15.35 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 15.35
Tolerance mm : + 0.05

Pressure hPa : Rated speed rpm : 500
rack travel mm : 12.10
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 510
rack travel mm : 13.10
Tolerance mm : + 0.20

Pressure hPa : 780
rack travel mm : 14.50
Tolerance mm : + 0.05

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 209.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 12.10
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 165.0
Tolerance
cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s.

: ← 6.0

Spreed Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.04.97 Test oil : ISO 4113

Combination No. : 0 402 648 603

Injection pump

Pump designation : PE8P120A720LS7427T

EP type number : 0 412 628 919

Governor

Governer design. : RQ750PA1227-1 Governer no. : 0 421 801 812

Cust. part No. : 1391886

Customer-spec. information

Customer : SCANIA

Motor : DSI(C)14...A,M

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2A- 7- 3A- 4

: - 6 : element)

Phasing : 0-45-90-135-180

: -270-315 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 16.45

Tolerance mm : +- 0.05	4.
	Rated speed rpm : 700
Del. quantity cm3/1000 strokes : 324.0	+ Aneroid pressure + hPa : 1500
CIID/ 1000 Strokes : 324.0	Del. quantity
Tolerance	+ cm3/1000 strokes : 324.0
cm3/1000 strokes : +- 1.0	+ Tolerance
Oh a h h h h h h	+ cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 10.0	+ Check tolerance + cm3/1000S. : +- 10.0
(10.0	- Chis/10003 + 10.0
Spreed	+ Tolerance
- 1	+ cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : 8.0	+ Check tolerance
cms/ (but strokes : 6.0	+ cm3/1000s. : 12.0
Check tolerance	
cm3/1000s. : 12.0	
	+ CONTROL LEVER
	t control lever
	position degree : 28.0
Rack travel in mm: 6.50	tolerance degree : + 4.0
Tolerance mm : + 0.10	†
Del. quantity cm3/1000 strokes : 38.0	+ control lever
Tolerance	<pre>position degree : 89.0 tolerance degree : +- 4.0</pre>
cm3/1000 strokes : +- 4.0	toter and degree 4.5
Check tolerance	+
cm3/1000s. : +- 6.0	+ ASSEMBLY GOVERNOR SETTING
Spreed Tolerance	+ Rated speed rpm : 750
sm3/1000 strokes : 5.0	+ Rated speed rpm : 750 → rack travel mm : 15.50
Check tolerance	+
cm3/1000s. : 9.0	Rated speed rpm : 785
	+ Tolerance 1/min : + 4
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	rack travel mm : 0.50
	Tolerance mm : +- 0.50
	Rated speed rpm : 850
GUIDE SLEEVE TRAVEL	1
Rated speed rpm : 759	Rated speed rpm : 751
guide sleeve	rack travel mm : 15.50
travel mm : 4.86	†
Tolerance mm : + 0.15	+ Rated speed rpm : 786
Rated speed rpm : 797	<pre>+ Tolerance 1/min : +- 4 + rack travel mm : 4.00</pre>
guide sleeve	+
travel mm : 10.00	+ rack travel mm : 0.50
Tolerance mm : +- 0.25	Tolerance mm : + 0.50
Rated speed rpm : 850	Rated speed rpm : 850
guide sleeve	1
travel mm : 11.50	Rated speed rpm : 752
Tolerance mm : + 0.50	rack travel mm : 15.50
	Rated speed rpm : 787
FULL LOAD DELIVERY AT FULL LOAD STO	
THE SAME APPRICATION OF TAMES TOUR OLD	T TO SECURITION TO THE TOTAL T

rack travel non	: 4.00	†	Tolerance mm	: → 0.05	
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 850	† † †	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.50	
Rated speed rpm rack travel mm	: 753 : 15.50	† +	MEASUREMENT		
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	‡	Rated speed rpm Pressure hPa rack travel mm	: 500 : 420 : 13.60	
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 850	+	Tolerance mm Pressure hPa rack travel mm Tolerance mm		
Rated speed rpm rack travel mm	: 754 : 15.50	‡	Start interlock		
Rated speed rpm Tolerance 1/min rack travel mm		Ī	FUEL DELIVERY CHA	ARACTERISTICS	
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ∹- 0.50 : 850	† † †	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes		
Rated speed rpm rack travel man	: 755 : 15.50	‡	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 7.0	
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	Ī		. +- /.0	
· · · · · · · · · · · · · · · · · · ·				FUEL DELIVERY	
Tolerance mm Rated speed rpm	: + 0.50 : 850	† †	Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 12.50 : + 0.20	
TORQUE CONTROL			cin3/1000 strokes Tolerance	: 180.0	
Rated speed rpm	: 700	+	cm3/1000 strokes	: +- 20.0	
rack travel mm Tolerance mm	: 16.45 : + 0.05	‡	Check tolerance cm3/1000s.	: +- 24.0	
ANEROID/ALTITUDE COMPENSATOR TEST		+			
SETTING		+			

End of test specification sheet

Rated speed rpm Pressure hPa rack travel mm 500 1500 16.45

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18,04,97 Test oil : ISO 4113

Combination No. : 0 402 648 926

Injection pump

Pump designation : PE8P120A320LS7840 EP type number : 0 412 628 850

Governor

Governer design. : RQ300/1050PA972-11 Governer no. : 0 421 801 739

Cust. part No. : 0220747002

Customer-spec. information Customer : MB-NFZ : OM442 A Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar 0.1

Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1 680 750 075 Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

: ← 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : + 0.50

: 8-7-2-6-3 Firing order

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : + 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

Barrel no. : 8

BASIC SETTING

1050 Rated speed rpm :

Rack travel in mm: 12.60

Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes : 194.0

Tolerance cm3/1000 strokes : +- 1.0

B06

	\perp + Tolerance mm : +- 0.10
Check tolerance	+
cm3/1000s. : +- 4.0	Rated speed rpm : 1290
	guide sleeve
Spreed	+ travel mm : 11.50
op. 000	+ Tolerance mm : + 0.50
Tolerance	T rocerance limi . To 0.00
	†
cm3/1000 strokes : 8.0	
	+ GUIDE SLEEVE POSITION
Check tolerance	†
cm3/1000s. : 11.0	+
	+ control lever
	position degree : 109
	Rated speed rpm : 600
Rated speed rpm : 300	
	Rack travel in mm: 20.00
Rack travel in mm : 6.50	+ Tolerance mm : +- 0.80
Tolerance mm : + 0.10	Total arice finit . 1 = 0.00
	T
Del. quantity	PINI LOAD OF THEFTY AT THE LOAD
cm3/1000 strokes : 13.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	†
cm3/1000 strokes : +- 3.0	+ Rated speed rpm : 1050
Check tolerance	+ Aneroid pressure
cm3/1000s. : +- 6.0	+ hPa : 1000
Spreed	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 194.0
cm3/1000 strokes : 4.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : + 1.0
cm3/1000s. : 8.0	Check tolerance
CIID/ 10003 0.0	
	+ cm3/1000s. : + 4.0
(D) OFFICE OF THE COTTON OF THE	Spreed
(B) SETTING OF INJECTION PUMP	+ Spreed + Tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Spreed Tolerance cm3/1000 strokes: 8.0
	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
WITH GOVERNOR	Spreed Tolerance cm3/1000 strokes: 8.0
	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance
GUIDE SLEEVE TRAVEL	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance
WITH GOVERNOR	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s. : 11.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10	Spreed Tolerance cm3/1030 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve	Spreed Tolerance cm3/1030 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050	Spreed Tolerance cm3/1030 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve cuide sleeve : 1050 guide sleeve	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : +- 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : +- 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 1050 guide sleeve travel mm : 6.00	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60 Rated speed rpm: 1098 Tolerance 1/min: + 8 rack travel mm: 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 1050 guide sleeve travel mm : 6.00	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60 Rated speed rpm: 1098 Tolerance 1/min: + 8 rack travel mm: 4.00 Rated speed rpm: 1200
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60 Rated speed rpm: 1098 Tolerance 1/min: + 8 rack travel mm: 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402	Spreed Tolerance cm3/1030 strokes: 8.0 Check tolerance cm3/1000s.: 11.0 CONTROL LEVER control lever position degree: 96.0 tolerance degree: + 4.0 RATED SPEED rack travel mm: 11.60 Rated speed rpm: 1098 Tolerance 1/min: + 8 rack travel mm: 4.00 Rated speed rpm: 1200 Tolerance 1/min: + 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : + 15 rack travel mm : 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve travel mm : 402 guide sleeve travel mm : 3.68	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : + 15 rack travel mm : 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve travel mm : 3.68 Tolerance mm : + 0.10	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve travel mm : 3.68 Tolerance mm : + 0.10 Rated speed rpm : 3.68 Tolerance mm : + 0.10	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : 40.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : 40.10 Rated speed rpm : 6.00 Tolerance mm : 402 guide sleeve travel mm : 402 guide sleeve travel mm : 3.68 Tolerance mm : 401 Rated speed rpm : 3.68 Tolerance mm : 540 guide sleeve	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
GUIDE SLEEVE TRAVEL Rated speed rpm : 1104 guide sleeve travel mm : 6.37 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 1.85 Tolerance mm : + 0.10 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 402 guide sleeve travel mm : 3.68 Tolerance mm : + 0.10 Rated speed rpm : 3.68 Tolerance mm : + 0.10	Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1098 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75

		†	rack travel mm	: 12.35
LOW IDLE		+	Tolerance mm	: +- 0.20
		Į	Start interlock	
control lever position degree tolerance degree		+	Rated speed rpm Rated speed rpm	
Testing:		‡	Check speed 1/min Check	: > 80
Rated speed rpm rack travel mm Tolerance mm	: 6.50	<u> </u>	speed 1/min	: < 240
rack travel mm	: 2.00	<u>†</u>	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm Tolerance 1/min	: 435		Aneroid pressure hPa Rated speed rpm	: 1000 : 800
Rated speed rpm	: 200	Ţ	Del. quantity	
CRT mm min.	: > 7.90	+	cm3/1000 strokes Tolerance	
		‡	cm3/1000 strokes Check tolerance	: ÷ 2.0
TORQUE CONTROL		1	cm3/1000s.	: +- 5.0
Rated speed rpm		+	Aneroid pressure	
rack travel mm Tolerance mm	: 12.60 : + 0.10	‡	hPa Rated speed rpm	: 500
Detect and a second	000	+	Del. quantity	
Rated speed rpm rack travel mm	: 800 : 12.60	1	cm3/1000 strokes Tolerance	: 138.0
Tolerance mm	: 0.10	+	cm3/1000 strokes	: - 1.0
	···	‡	Check tolerance cm3/1000s.	: +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		+		
SETTING		+	STARTING FUEL DEL	IVERY
	. /50	+	Rated speed rpm	: 100
Rated speed rpm Pressure hPa rack travel nm	: 450 : 1000 : 12.60	Ī	Del. quantity cm3/1000 strokes Tolerance	: 190.0
Tolerance mm	: + 0.05	Ţ	cm3/1000 strokes	: +- 15.0
Pressure hPa	: -	‡	Check tolerance cm3/1000s.	: +- 19.0
Rated speed rpm rack travel mm Tolerance mm	: 450 : 11.10 : ← 0.15	‡		
MEASUREMENT		+	LOW IDLE	
Rated speed rpm	: 450	+	Rated speed rpm	: 300
	: 380	+	Del. quantity cm3/1000 strokes	
Pressure hPa rack travel mm	: 12.10	Į	Tolerance	: 13.0
Tolerance mm	: +- 0.15	†	cm3/1000 strokes Check tolerance	: + 3.0
Pressure hPa	: -	Į	cm3/1000s.	: +- 6.0

Spreed

Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.04.97 Test oil : ISO 4113

Combination No. : 0 402 648 927

Injection pump

Pump designation : PE8P12OA32OLS7840 EP type number : 0 412 628 850

Governor

Governer design. : RQV300...1050PA797

: 8

Governer no. : 0 421 814 084

Cust. part No. : 0220747102

Customer—spec. information Customer : MB-NFZ Motor : OM442 A Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05
Check

CHECK

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

Phasing : 0-45-90-135-180

: -270-315 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.60

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 194.0

1	Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : 6.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance	
cm3/1000 strokes : 6.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	<pre>control lever position degree : 122.0 tolerance degree : +- 4.0</pre>
. †	DATES OFFE
Rated speed rpm : 300	RATED SPEED rack travel mm : 11.60
Rated speed rpm : 300	rack travel mm : 11.60 Rated speed rpm : 1095
Rack travel in mm: 6.50	Tolerance 1/min : +- 5
Tolerance mm : + 0.10	Total arice 17 million
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 13.0	Rated speed rpm : 1165
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : +- 3.0 +	
Check tolerance	rack travel mm : 0.50
cm3/1000s. : + 6.0 +	Tolerance mm : +- 0.50
Spreed +	Rated speed rpm : 1250
Tolerance	
cm3/1000 strokes : 4.0	
Check tolerance + cm3/1000s. : 8.0 +	
	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever
	position degree : 86.0
1	tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Testing:
AND DESCRIPTION	resemg.
1	Rated speed rpm : 300
control lever	rack travel mm : 6.50
position degree : -1	Tolerance mm : + 0.10
Rated speed rpm : 1100	Data di sana di sana di Sana di Sana
Book troval in ma . 16 50	Rated speed rpm : 200
Rack travel in mm: 16.50 + Tolerance mm: + 1.30 +	CRT mm min. : > 7.90
Toterance man . The 1.50	CKT IMIT IN ITT
	Rated speed rpm : 375
FULL LOAD DELIVERY AT FULL LOAD STOP	The state of the s
+	
Rated speed rpm : 1050	TORQUE CONTROL
Aneroid pressure	Dated aread run 4000
hPa : 1000 + Del. quantity +	Rated speed rpm : 1050
ver, qualities T	Pack traval mm ' IZ foll
	rack travel mm : 12.60
cm3/1000 strokes : 194.0	Tolerance mm : +- 0.05
	Tolerance mm : +- 0.05
cm3/1000 strokes : 194.0 +	Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Pressure hPa 1000 rack travel mm 12.60 Tolerance mm : ← 0.05

Pressure hPa Rated speed rpm 450 11,10 rack travel mm : +- 0.15 Tolerance mm

MEASUREMENT

380 Pressure hPa 12.10 rack travel mm : + 0.15 Tolerance mm

Pressure hPa 12.35 rack travel mm Tolerance mm : +- 0.20

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 220

Check

speed 1/min 80 ; > Check

240 speed 1/min : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 800 Rated speed rpm Del. quantity

cm3/1000 strokes : 195.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 5.0

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity cm3/1000 strokes : 138.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

4.0 cm3/1000S.

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity

cm3/1000 strokes :

190.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s.8.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 23,04,97 Test oil : ISO 4113

Combination No. : 0 402 678 833

Injection pump

Pump designation : PE8P120A720LS7358 EP type number : 0 412 628 899

Governor

Governer design. : RSV350...1100P8A652

: 0 421 833 570 Governer no.

Cust. part No. : 1391880

Customer-spec. information Customer : SCANIA

: DSI1468M/-75M Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : +-

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2A- 7- 3A- 4

: - 6

: elemente)

: 0-45-90-135-180 Phasing

: -270-315

Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 14.95	
Rack travel in mm: 14.95 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 283.0	Rated speed rpm : 700 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 1500 Del. quantity cm3/1000 strokes : 283.0
Check tolerance cm3/1000s. : + 8.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000s. : + 8.0 Spreed
Tolerance cm3/1000 strokes : 8.0	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	. 12.0
<u> </u>	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 59.0
Rack travel in mm: 5.80 Tolerance mm: : + 0.10	tolerance degree : + 4.0
Del. quantity cm3/1000 strokes : 42.0 Tolerance	<pre>control lever position degree : 109.0 tolerance degree : +- 4.0</pre>
cm3/1000 strokes : + 3.0 Check tolerance	RATED SPEED
cm3/1000s. : + 6.0	rack travel mm : 13.95 Rated speed rpm : 1145
Tolerance + cm3/1000 strokes : 4.0 + Check tolerance	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
cm3/1000s. : 8.0	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1240 Tolerance 1/min : +- 15 Check
+	speed 1/min : +- 20
GUIDE SLEEVE POSITION	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1400
control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 4.00 Rated speed rpm : 1270
Rack travel in mm: 0.50 Tolerance mm: + 0.20	
governor spring pre-tension	LOW IDLE
click setting x : 6.00	<pre>control lever position degree : 76.0 tolerance degree : +- 4.0</pre>

control lever 26.0 position degree : tolerance degree : +-4.0 Setting point w/out bumper spring 350 Rated speed rpm rack travel mm 5.30 Tolerance mm : + 0.10Testing: Rated speed rpm 350 rack travel mm 5.80 0.10 Tolerance mm rack travel mm 2.00 Rated speed rpm 580 Tolerance 1/min 30 Rated speed rpm 100 CRT mm min. : > 10.50 TORQUE CONTROL 700 Rated speed rpm rack travel mm 14.95 Tolerance mm : +- 0.05 Rated speed rpm 1100 rack travel mm 14.95 Tolerance mm : + 0.10ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm Pressure hPa 1500 rack travel mm 14.95 Tolerance mm : +- 0.05 Pressure hPa 500 Rated speed rpm : 10.80 rack travel mm : + - 0.20Tolerance mm **MEASUREMENT**

500

540

: +- 0.20

12.30

13,95 rack travel mm Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1500 Rated speed rpm 1100 Del. quantity cm3/1000 strokes : 255.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. 8.0 Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s.5.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 10.80 Tolerance mm : + - 0.30Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm 350 Del. quantity cm3/1000 strokes : 42.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed

Tolerance

cm3/1000 strokes :

4.0

Pressure hPa

850

Rated speed rpm

Pressure hPa

Tolerance mm

rack travel mm

cm3/1000s.	;	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.04.97 Test oil : ISO 4113

Combination No. : 0 402 678 836

Injection pump

Pump designation : PE8P120A320LS7844 EP type number : 0 412 628 860

Governor

Governer design. : RSV550...1050P0A672

Governer no. : 0 421 833 591

Cust. part No. : 0270746402

Customer—spec. information Customer : MB-NFZ Motor : 0M442LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315 Tolerance : +- 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 15.60

Tolerance mm : +- 0.05	Rated speed rpm : 1050 Aneroid pressure
Del. quantity cm3/1000 strokes : 270.0	hPa : 1200 Del. quantity
Tolerance	cm3/1000 strokes : 270.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 4.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : 5.0	Check tolerance cm3/1000S. : 9.0
Check tolerance cm3/1000s. 9.0	CONTROL LEVER
Rated speed rpm : 550	control lever position degree : 90.0 tolerance degree : +- 4.0
Rack travel in mm: 3.80 Tolerance mm: + 0.10 Del. quantity	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 19.0 + Tolerance	Rated speed rpm : 1070 Tolerance 1/min : + 1
cm3/1000 strokes : +- 3.0	rack travel mm : 14.60 Rated speed rpm : 1110
Spreed Tolerance + cm3/1000 strokes : 8.0	Tolerance 1/min : +- 4 rack travel mm : 4.00
Check tolerance cm3/1000s. : 12.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1071
WITH GOVERNOR	Tolerance 1/min : +- 1 rack travel mm : 14.60
GUIDE SLEEVE POSITION	Rated speed rpm : 1111 Tolerance 1/min : +- 4 rack travel mm : 4.00
control lever position degree : -3 Rated speed rpm : 800	rack travel mm : 0.85 Tolerance mm : + 0.55
Rack travel in mm: 0.50 + Tolerance mm: +- 0.20	Rated speed rpm : 1200
governor spring + + + + + + + + + + + + + + + + + + +	Rated speed rpm : 1072 Tolerance 1/min : +- 1 rack travel mm : 14.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1112 Tolerance 1/min : +- 4 rack travel mm : 4.00
r	

rack travel mm Tolerance mm	: +- 0.55	Rated speed rpm : 100
Rated speed rpm	: 1200 -	CRT mm min. : > 19.50
	-	SET IDLE AUXILIARY SPRING
Rated speed rpm Tolerance 1/min rack travel mm	: ← 1 -	rack travel mm : 2.00
Rated speed rpm	• 1113	TORQUE CONTROL
Tolerance 1/min		TONGOL CONTROL
rack travel mm		Rated speed rpm : 1050
	-	rack travel mm : 15.60
rack travel mm	: 0.85 : + 0.55	Tolerance mm : + 0.05
Tolerance mm		Poted aread area (00)
Rated speed rpm	: 1200 -	Rated speed rpm : 600 rack travel mm : 15.60
		rack travel mm : 15.60 Tolerance mm : +- 0.10
Rated speed rpm	: 1074	Total allocations
Tolerance 1/min		
rack travel mm	: 14.60 -	ANEROID/ALTITUDE
	-	COMPENSATOR TEST
Rated speed rpm		•
Tolerance 1/min rack travel mm		SETTIALC
rack travet imi	: 4.00	SETTING
rack travel mm	: 0.85	Rated speed rpm : 500
		Rated speed rpm : 500 Pressure hPa : 1200
Tolerance mm Rated speed rpm	: 1200 -	Pressure hPa : 1200 rack travel mm : 15.60
	-	•
5 -4-4-5-4-4-4-4-4	4475	Pressure hPa : -
Rated speed rpm Tolerance 1/min	: + 1 - 1 -	Rated speed rpm : 500 rack travel mm : 9.50
rack travel mm		rack travet mm : 9.50
TOOK STOVEL IIIII	. ,,,	MEASUREMENT
Rated speed rpm		1
Tolerance 1/min		Rated speed rpm : 500
rack travel mm:	: 4.00 -	
mode though ma	: 0.85	Pressure hPa : 500 rack travel mm : 11.00
rack travel mm Tolerance mm		rack travel mm : 11.00
TOCCI GITTOC TIET		Pressure hPa : 700
		rack travel mm : 13.00
LOW IDLE	-	†
	-	Start interlock
control lever	-	
position degree	: 70.0	
tolerance degree		FUEL DELIVERY CHARACTERISTICS
	-	
Testing:	-	Aneroid pressure
Rated speed rpm	. 550	hPa : 1200 Rated speed rpm : 600
rack travel mm	: 3.80 -	Del. quantity
Tolerance mm	: +- 0.10	cm3/1000 strokes : 290.0
The second second	-	Tolerance
rack travel mm		cm3/1000 strokes : +- 2.0
Rated speed rpm		Check tolerance
Tolerance 1/min	: +- 30 -	cm3/1000s. : +- 5.0
	_	Γ

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity cm3/1000 strokes : 162.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000S.4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 16.50 :

Del. quantity

cm3/1000 strokes : 280.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000S. : **←** 19.0

LOW IDLE

Rated speed rpm 550

Del. quantity cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000S. 6.0

Spreed Tolerance

cm3/1000 strokes : 0.8

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.04.97 Test oil : ISO 4113

Combination No. : 0 402 678 839

Injection pump

Pump designation : PE8P12OA32OLS7912 EP type number : 0 412 628 927

Governor

Governer design. : RSV550...1050P0A681

Governer no. : 0 421 833 600

Cust. part No. : 028 074 2802

Customer-spec. information Customer : MB-NFZ

Motor : OM402LA, Euro

Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 120

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315 : +- 0.30

Tolerance

ck

Check

tolerance °NW : → 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 13.70

Tolerance mm	: +- 0.05	+ Del. quantity	
		+ cm3/1000 strokes	: 208.0
Del. quantity cm3/1000 strokes	: 208.0	+ Tolerance + cm3/1000 strokes	: + 1.0
CHIDY TOUGH SCHOKES	; 200.0	+ Check tolerance	: +- 1.0
Tolerance		+ cm3/1000s.	: + 4.0
cm3/1000 strokes	: ← 1.0	+ Spreed	
Charle dall ansura		+ Tolerance	5.0
Check tolerance cm3/1000s.	: + 4.0	+ cm3/1000 strokes + Check tolerance	: 5.0
	4.0	- cm3/1000s.	: 9.0
Spreed	The state of the s	+	
Tolerance		ASSEMBLY COVERNOR	COTTALC
cm3/1000 strokes	: 5.0	ASSEMBLY GOVERNOR	SELLING
51107 1000 001 0R00		Rated speed rpm	: 1070
Check tolerance		+ Tolerance 1/min	: + 1
cm3/1000S.	: 9.0	rack travel mm	: 12.70
		Rated speed rpm	: 1110
		+ Tolerance 1/min	
Rated speed rpm	: 550	† rack travel mm	: 4.00
Dook doored in me	. 7.0	†	. 0.55
Rack travel in mm Tolerance mm	: 3.60 : +- 0.10	+ rack travel mm + Tolerance mm	: 0.55 : + 0.55
Del. quantity	3.10	Rated speed rpm	: 1300
cm3/1000 strokes	: 18.0	+	
Tolerance		†	4074
cm3/1000 strokes Check tolerance	: +- 3.0	+ Rated speed rpm + Tolerance 1/min	: 1071
cm3/1000S.	: +- 6.0	+ rack travel mm	12.70
Spreed		+	
Tolerance		Rated speed rpm	: 1111
cm3/1000 strokes Check tolerance	: 8.0	† Tolerance 1/min † rack travel mm	: +- 4
cm3/1000s.	: 12.0	Tack travet min	. 4.00
		rack travel mm	: 0.55
(D) OFFTTNO OF THE	ICOTTON DUMP	† Tolerance mm;	: + 0.55
(B) SETTING OF INJ WITH GOVERNOR	LECTION PUMP	Ī	
WZIII GOVERNON		Rated speed rpm	: 1072
		+ Tolerance 1/min	
CHINE OF EACH POST	TAN	† rack travel mm	: 12.70
GUIDE SLEEVE POSIT	TON	Rated speed rpm	: 1112
		+ Tolerance 1/min	: +- 4
control Lever	_	† rack travel mm	: 4.00
position degree Raced speed rpm	: - 3 : 800	t rack travel mm	: 0.55
Raced speed thii	. 600	+ Tolerance mm	: +- 0.55
Rack travel in mm	: 0.50	+	
Tolerance mm	: +- 0.20	† 544	4077
**************************************		+ Rated speed rpm + Tolerance 1/min	: 1073 : + 1
FULL LOAD DELIVERY	AT FULL LOAD STOP	+ rack travel mm	12.70
		+	
Rated speed rpm	: 1030	Rated speed rpm	: 1113
Aneroid pressure hPa	: 1000	† Tolerance 1/min + rack travel mm	: +- 4
TIV M	. 1000	+ Clavec (ini)	. 4.00
		•	

rack travel mm Tolerance mm	•	Rated speed rpm : 600 rack travel mm : 14.70 Tolerance mm : + 0.10
Rated speed rpm Tolerance 1/min rack travel mm	: + 1 +	Rated speed rpm : 900 rack travel mm : 14.20 Tolerance mm : + 0.05
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	ANEROID/ALTITUDE COMPENSATOR TEST
rack travel mm Tolerance mm	: 0.55 : + 0.55	SETTING
Rated speed rpm Tolerance 1/min rack travel mm	:+- 1 +	Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 14.70 Tolerance mm : + 0.15
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4 +	Pressure hPa : - Rated speed rpm: : 500 rack travel mm : 12.40 Tolerance mm : + 0.10
rack travel mm Tolerance mm	: 0.55 : + 0.55	MEASUREMENT
LOW IDLE		Rated speed rpm : 500
control lever position degree tolerance degree Testing:	: 67.0 : +- 4.0	Pressure hPa : 650 rack travel mm : 13.40 Tolerance mm : + 0.15 Pressure hPa : 750 rack travel mm : 14.00 Tolerance mm : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 3.60	Start interlock
rack travel mm Rated speed rpm Tolerance 1/min	: 590	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1000
Rated speed rpm	: 100	Rated speed rpm : 600 Del. quantity
CRT mm min.	: > 19.50	cm3/1000 strokes : 240.0 Tolerance
SET IDLE AUXILIA	RY SPRING	cm3/1000 strokes : +- 2.0 Check tolerance
rack travel mm	: 2.00	cm3/1000s. : +- 5.0 Spreed Tolerance
TORQUE CONTROL	1	cm3/1000 strokes : 8.0
Rated speed rpm rack travel mm Tolerance mm		Check tolerance cm3/1000S. : 12.0 Aneroid pressure hPa : -

Rated speed rpm 500 Del. quantity cm3/1000 strokes : 170.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 220.0
Tolerance
cm3/1000 strokes : - 10.0
Check tolerance
cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 550 Del. quantity cm3/1000 strokes : 18.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s.6.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.04.97 Test oil : ISO 4113

Combination No. : 0 402 744 801

Injection pump

Pump designation : PES4P120A320RS7380

EP type number : 0 412 724 802

Governor

Governer design. : RQV275...1200PA1232K

Governer no. : 0 421 815 469

Cust. part No. : CCEP 5149B 66-237

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 04-02-26 B4 Motor

Power KW : 110.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. L/h : 105 Tolerance L/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 11.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

*NW before FB : 0.30 : +- 0.50

Tolerance Check

tolerance *NW : **←** 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel 11.00 Difference * CS : 1.50

	+ Rated speed rpm : 325
CRT ZERO POSITION	<pre>guide sleeve travel mm : 1.52 Tolerance mm : + 0.20</pre>
Rack travel in mm : 12.80 Tolerance mm : +- 0.05	Rated speed rpm : 894 guide sleeve
BASIC SETTING	travel mm : 6.60 Tolerance mm : + 0.25
Rated speed rpm : 1200	Rated speed rpm : 560 guide sleeve
Del. quantity cm3/1000 strokes : 239.0	travel mm : 4.01 Tolerance mm : + 0.25
Tolerance	Rated speed rpm : 1650 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	T GOIDE SEEEVE TOSTITON
Tolerance : 5.0	control lever position degree : - 1 Rated speed rpm : 1482
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 11.70 Tolerance mm : +- 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOR
Rack travel in mm : -6.80 Tolerance mm : + 0.10	Rated speed rpm : 1200 Aneroid pressure
Del quantity cm3/1000 strokes : 40.0	hPa : 1200 Del. quantity
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance	cm3/1000 strokes : 239.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. : +- 6.0 Spreed	Check tolerance cm3/1000S. : : - 4.0
Tolerance cm3/1000 strokes : 8.0	Spreed Tolerance
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 5.0 Check tolerance
(D) OFFITAIO OF TALIFOTTON DUMP	† cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 296.0
Rated speed rpm : 1272 guide sleeve	position degree : 296.0 tolerance degree : + 4.0
travel mm : 9.31 Tolerance mm : + 0.15	RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1265
	• • • • • • • • • • • • • • • • • • • •

Tolerance 1/min	: + 15
rack travel mm Rated speed rpm Tolerance 1/min	: -8.80 : 1410 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: -12.30 : +- 0.50 : 1500
LOW IDLE	
control lever position degree tolerance degree	: 253.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : -6.80 : +- 0.10
Rated speed rpm	: 200
CRT mm min.	: < -4.70
Rated speed rpm	: 390
TORQUE CONTROL	
Rated speed rpm	: 1200
Reted speed rpm	: 700
rack travel mm Tolerance mm	: −1.15 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 350 : −2.90 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1200 : 1200
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : -4.10 : + 0.20

MEASUREMENT	
Rated speed rpm	: 1200
Pressure hPa rack travel mm Tolerance mm	: 200 : -3.40 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 320 : -2.75 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 155 : < 275
Check speed 1/min Check speed 1/min	: > 135 : < 285
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 700
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 700 : 240.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 700 : 240.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1200 : 700 : 240.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 700 : 240.0 : + 3.0 : + 6.0

STARTING FUEL DELIVERY

Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	90.0
Tolerance cm3/1000 strokes	: +	- 15.0
Check tolerance cm3/1000s.	: +	- 19.0

Tolerance mm

LOW IDLE

Rated speed rpm Del. quantity	:	325	
cm3/1000 strokes	:	40.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	6.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 744 804

Injection pump

Pump designation : PES4P120A320RS7402

EP type number : 0 412 724 804

Governor

Governer design. : RQV275...1200PA1257K

Governer no. : 0 421 815 494

Cust. part No. : CCEP 5154A 66-238

Customer-spec. information

Customer : RENAULT V.I.

: MIDR U4-02-26 A4 Motor

: 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

: 125 min. L/h min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance ban : +- 1.0

: 5.10 : + 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 13.00 Tolerance mm : + 0.50

Firing order : 1-3-4-2

: 0-90-180-270 : +- 0.30 Phasing

Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

*NW arter s.o.d. : -0.30

: +- 0.50 Tolerance Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

13.00 travel travel : 13.00 Difference * CS : 2.40

		+	Rated speed rpm	:
		 +	guide sleeve	
CRT ZERO POSITION		†	travel mm	:
		†	Tolerance mm	:
Rack travel in mm	13.40	I	Rated speed rpm	:
Tolerance mm	+- 0.05	1	guide sleeve	_
		+	travel mm	:
			Tolerance mm	:
BASIC SETTING		1	Rated speed rpm	
Rated speed rpm	1200	I	guide sleeve	•
deed opera i biii	. 1200	I	travel mm	
el. quantity			Tolerance mm	•
m3/1000 strokes	261.0	1	TOTAL GITTE HAIR	•
			Rated speed rpm	:
Tolerance		t	guide sleeve	
m3/1000 strokes	: ← 1.0	+	travel mm	:
		+	Tolerance mm	•
theck tolerance m3/1000s.	· + 4.0	†		
:m3/ 10003.	4.0	Ī	GUIDE SLEEVE POSI	TI
preed				
olerance		†	control lever	
m3/1000 strokes	5.0	Ť		
IID TOOD SETORES	. 5.0	Ť	position degree	
heck tolerance		 I	Rated speed rpm	•
m3/1000s.	9.0	1	Rack travel in mm	:
		1	Tolerance mm	:
		+	TO COT GITTEE THE	•
lated aread man	725	†	FULL LOAD DELTUED	
Rated speed rpm	325	Ī	FULL LOAD DELIVER	T
Rack travel in mm	-8.90	1	Rated speed rpm	:
olerance mm	+ 0.10	1	Aneroid pressure	
el. quantity		1	hPa	:
m3/1000 strokes	33.0	1	Del. quantity	•
olerance		1	cm3/1000 strokes	:
m3/1000 strokes	+ 2.0	1	Tolerance	•
heck tolerance		1	cm3/1000 strokes	:
	: ← 6.0	1	Check tolerance	•
preed		1	cm3/1000s.	:
olerance		1	Spreed	•
m3/1000 strokes	8.0	1	Tolerance	
heck tolerance		1	cm3/1000 strokes	:
	12.0	1	Check tolerance	•
	• -	1	cm3/1000s.	:
		+		
(B) SETTING OF INJE	ECTION PUMP	+		
VITH GOVERNOR		†	CONTROL LEVER	
		I	CONTROL LEVER	
GUIDE SLEEVE TRAVEL	_	+	control lever	
			position degree	:
	1260	†	tolerance degree	:
juide sleeve :ravel mm	10.32	Ī	RATED SPEED	
	+ 0.15		rack travel mm	•
			Pated speed rom	:

+	Rated speed rpm	: 325
1	guide sleeve	. 323
1	travel mm	: 1.52
1	Tolerance mm	: +- 0.20
1		
+	Rated speed rpm	: 938
+	guide sleeve	
+	travel mm	: 6.86
+	Tolerance mm	: + 0.25
+		
+	Rated speed rpm	: 550
t	guide sleeve	
+	travel mm	: 3.92
+	Tolerance mm	: + 0.25
†		4.450
. †	Rated speed rpm	: 1650
†	guide sleeve	. 47 50
Ť	travel mm	: 13.50
Ť	Tolerance mm	: +- 0.50
I		
Ι	GUIDE SLEEVE POSIT	TTON
I	COINT STEEAE LOST	TO! 4
1		
1	control lever	
1		: - 1
1	position degree Rated speed rpm	: 1450
1	mayon apoon ip	,,,,,,
+	Rack travel in mm	: 12.10
+	Tolerance mm	: + 1.50
+		
+		
+	FULL LOAD DELIVERY	AT FULL LOAD STOP
+		
† † † †	Rated speed rpm	AT FULL LOAD STOP
† † † † †	Rated speed rpm Aneroid pressure	: 1200
+++++	Rated speed rpm Aneroid pressure hPa	
++++++	Rated speed rpm Aneroid pressure hPa Del. quantity	: 1200 : 1200
+++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 1200
+++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	: 1200 : 1200 : 261.0
+++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 1200
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1200 : 1200 : 261.0 : + 1.0
+++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0
++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 1200 : 261.0 : + 1.0
++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0
++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0
+++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0
++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0
++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0
+++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0
++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 298.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 298.0
+++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree RATED SPEED	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 298.0 : + 4.0
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree RATED SPEED rack travel mm	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 298.0 : + 4.0 : -1.00
+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree RATED SPEED	: 1200 : 1200 : 261.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 298.0 : + 4.0

Tolerance 1/min :	+- 5 +	Rated speed rpm	• 1200
TO COT CITION TO MARKET	1	rack travel mm	: -3.20
rack travel mm :	-9.40	rack travel mm Tolerance mm	: + 0.20
Rated speed rpm :	1405		
Tolerance 1/min :	← 15 }	MEASUREMENT	
	+		
	-12.90	Rated speed rpm	: 1200
	+ 0.50		
Rated speed rpm :	1500 +	Pressure hPa	: 200
	†	rack travel mm	: -2.40
	†	Tolerance mm	: + 0.20
		Pressure hPa	: 440
LOW IDLE	1	rack travel mm	: -1.10
204 2000	1	Tolerance mm	: + 0.05
	1	TO COT OITO THE	
control lever	· +	Start interlock	
position degree :	252.0		
tolerance degree :	+- 4.0 +	Rated speed rpm	: > 130
-	+	Rated speed rpm	: < 275
Testing:	†		
But and opposed many	705	Check	: > 110
Rated speed rom : rack travel mm :	-8 on	speed 1/min Check	; > 110
Tolerance mm :	+ 0.10	speed 1/min	: < 285
roter difection :	I	speed 17 mm	. \ 203
Rated speed rpm :	225		
,	+	FUEL DELIVERY CHAP	RACTERISTICS
CRT mm inin. :	< 7.40		
	+	Aneroid pressure	
Rated speed rpm :	390 +	hPa	: 1200
	†	Rated speed rpm	: 850
TOPOLIE CONTROL	+	Del. quantity	3/0.0
TORQUE CONTROL	Ť	cm3/1000 strokes Tolerance	: 249.0
Rated speed rpm :	1200		. + 3.0
Matta speed by		cm3/1000 strakes	
	1200	cm3/1000 strokes	3.0
Rated speed rom :	+	Check tolerance	
Rated speed rpm :	850		: + 6.0
Rated speed rpm : rock travel mm : Tolerance mm :	850 -1.00	Check tolerance	
rack travel mm : Tolerance mm :	850 -1.00 + 0.10	Check tolerance cm3/1000s. Aneroid pressure hPa	: +- 6.0 : -
rack travel mm : Tolerance mm : Rated speed rpm :	850 -1.00 + 0.10	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: +- 6.0 : -
rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm :	850 -1.00 + 0.10 -700 -6.00	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: ← 6.0 : – : 700
rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm :	850 -1.00 + 0.10	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: ← 6.0 : – : 700
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: ← 6.0 : - : 700 : 153.0
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 6.0 : - : 700 : 153.0
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 6.0 :
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 6.0 :
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 6.0 :
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : ANEROID/ALTITUDE	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: ← 6.0 :
rock travel man : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm :	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: ← 6.0 :
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : ANEROID/ALTITUDE	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: ← 6.0 : 700 : 153.0 : ← 4.0 : + 8.0 : 1200
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : ANEROID/ALTITUDE COMPENSATOR TEST	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: ← 6.0 : 700 : 153.0 : ← 4.0 : + 8.0 : 1200
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : ANEROID/ALTITUDE	850 -1.00 + 0.10 -700 -6.00 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: ← 6.0 : 700 : 153.0 : ← 4.0 : ← 8.0 : 1200 : 183.0
rock travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : ANEROID/ALTITUDE COMPENSATOR TEST	850 -1.00 + 0.10 700 -6.00 + 0.20 700 -1.80 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 6.0 : 700 : 153.0 : ← 4.0 : ← 8.0 : 1200 : 183.0
rock travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : ANEROID/ALTITUDE COMPENSATOR TEST	850 -1.00 + 0.10 700 -6.00 + 0.20 700 -1.80 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 6.0 : 700 : 153.0 : ← 4.0 : ← 8.0 : 1200 : 183.0 : ← 1.0
rock travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : ANEROID/ALTITUDE COMPENSATOR TEST	850 -1.00 + 0.10 700 -6.00 + 0.20 700 -1.80 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 6.0 : 700 : 153.0 : ← 4.0 : ← 8.0 : 1200 : 183.0 : ← 1.0
rock travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : Rated speed rpm : rack travel man : Tolerance man : ANEROID/ALTITUDE COMPENSATOR TEST	850 -1.00 + 0.10 700 -6.00 + 0.20 700 -1.80 + 0.20	Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 6.0 : 700 : 153.0 : ← 4.0 : ← 8.0 : 1200 : 183.0 : ← 1.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000S. : +- 19.0

LOW IDLE

Rated speed rpm 325

Del. quantity

cm3/1000 strokes : 33.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000S. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s.

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.04.97 Edition Test oil : ISO 4113

Combination No. : 0 402 744 808

Injection pump

Pump designation : PES4P120A320RS7402 EP type number : 0 412 724 804

Governor

Governer design. : RQV275...1200PA1257

: 1K

: 0 421 815 553 Governer no.

Cust. part No. : CCEP5166 66-238

Customer-spec, information

Customer : RENAULT V.I. : MIDR 04-02-26 A4 Motor

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

: 125 min. L/h Tolerance l/h: +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 5.10 : + 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : -10.30

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

13.00 travel 2.40

Difference * CS :

Rack travel in mm : 13.40			+ Rated speed rpm : 325
Tolerance mm : + 0.20			— + guide sleeve
Rack travel in mm : 13.40	CRT ZERO POSITION	1	+ travel mm : 1.52
Tolerance mm			
## Travel mm			
BASIC SETTING Rated speed rpm : 1200 Rated speed rpm : 550 guide steeve travel mm : 3.92 Tolerance mm : + 0.25	Tolerance mm	: ← 0.05	
### BASIC SETTING Rated speed rpm : 1200 Del, quantity cm3/1000 strokes : 261.0 Tolerance			+ travel mm : 6.86
Rated speed rpm : 1200 Del. quantity			+ Tolerance mm : +- 0.25
Rated speed rpm : 1200	BASIC SETTING		+ Rated speed rom : 550
Del. quantity cm3/1000 strokes : 261.0 Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 1450 Rated speed rpm : 12.40 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hpa : 1200 Del. quantity cm3/1000 strokes : 33.0 Tolerance mm : + 0.10 Rated speed rpm : 1200 Aneroid pressure hpa : 1200 Del. quantity cm3/1000 strokes : 261.0 Tolerance cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : + 6.0 Spreed Check tolerance cm3/1000s. : + 4.0 Spreed Check tolerance cm3/1000s. : + 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Check tolerance cm3/1000s. : - 4.0 Spreed Control lever position degree : 298.0 tolerance degree : - 4.0 RATED SPEED Tolerance mm : - 1.00	Reted speed rom	• 1200	t in the second
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Tolerance cm3/1000 strokes : 261.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 1450 Rated speed rpm : 1240 Tolerance mm : + 1.30 Rated speed rpm : 1200 Rack travel in mm : -8.90 Tolerance mm : + 0.10 Pel. quantity cm3/1000 strokes : 33.0 Tolerance cm3/1000 strokes : - 2.0 Check tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : - 2.0 Check tolerance cm3/1000 strokes : - 2.0 Check tolerance cm3/1000 strokes : - 5.0 Check tolerance cm3/1000 strokes : - 5.0 Check tolerance cm3/1000 strokes : - 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : - 4.0 Spreed Tolerance cm3/1000s trokes : 5.0 Check tolerance cm3/1000s. : - 4.0 Spreed Tolerance cm3/1000s trokes : 5.0 Check tolerance cm3/1000s. : 9.0 (S) SET/ING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONT	Dol grandsty		
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 12.40 Tolerance mm : + 1.30 Rated speed rpm : 12.40 Tolerance mm : + 1.30 Rated speed rpm : 12.40 Tolerance mm : + 1.30 Rated speed rpm : 12.00 Aneroid pressure hPa : 1200 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 33.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : + 2.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s strokes : 5.0 Check tolerance cm3		2/4 0	† Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes	: 261.0	†
Travel mm			
Travel mm			
Tolerance mm : + 0.50	cm3/1000 strokes	: +- 1.0	
Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 325 Rated speed rpm : - 8.90 Rack travel in mm : -8.90 Rack travel in mm : -8.90 Rack travel in mm : -8.90 Rated speed rpm : 1200 Aneroid pressure hPa : 1200 Lougntity hold strokes : 33.0 Check tolerance cm3/1000 strokes : 261.0 Check tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 9.0 Check tolerance cm3/1000s. : + 9.0 Check tolerance cm3/1000s. : + 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Control Lever position degree : 298.0 tolerance degree : + 4.0 Rated speed rpm : 1260 guide sleeve travel mm : 10.32 Tolerance mm : + 0.15 Rated Speed rpm : -1.00			
Cm3/1000s. + 4.0 Guide Sleeve Position	Check tolerance		
GUIDE SLEEVE POSITION		: + 4.0	
Tolerance Control lever position degree -1 Rated speed rpm : 1450	CIRC/ 10000.	4.0	I GITTLE SLEEVE POSTITION
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Rack travel in mm : 12.40 Tolerance mm : + 1.30	cm3/1000 strokes	: 5.0	
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Tolerance mm : + 1.30	cm3/1000s.	: 9.0	+ Rack travel in mm : 12.40
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Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 33.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONTROL LEVER CONTROL LEVER CONTROL LEVER CONTROL LEVER Rated speed rpm : 1260 guide sleeve travel mm : 10.32 RATED SPEED Tolerance mm : + 0.15 RATED SPEED Tolerance mm : -1.00	Deal desiral de se		Detect around non- 1 1200
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Cin3/1000 strokes : 261.0 Cm3/1000 strokes : 261.0 Tolerance Cm3/1000 strokes : 4.0 Tolerance Cm3/1000 strokes : 4.0 Check tolerance Cm3/1000s.			1
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cm3/1000s. : + 6.0 Check tolerance Spreed cm3/1000s. : + 4.0 Tolerance Spreed Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP CONTROL LEVER GUIDE SLEEVE TRAVEL Control lever Rated speed rpm : 1260 control lever guide sleeve tolerance degree : + 4.0 travel mm : 10.32 RATED SPEED Tolerance mm : + 0.15 rack travel mm : -1.00	Check tolerance		+ cm3/1000 strokes : +- 1.0
Cm3/1000s. : + 4.0		: +- 6.0	
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1260 guide sleeve travel mm : 10.32 Tolerance mm : + 0.15 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 298.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00			
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Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 5.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Control Lever position degree : 298.0 tolerance degree : 4.0 RATED SPEED Tolerance mm : +- 0.15 RATED SPEED rack travel mm : -1.00		• ጸበ	
Cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP CONTROL LEVER GUIDE SLEEVE TRAVEL Control lever position degree : 298.0 tolerance degree : + 4.0 guide sleeve travel mm : 10.32 RATED SPEED rack travel mm : -1.00		. 0.0	
Cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONTROL LEVER Control lever position degree : 298.0 tolerance degree : + 4.0 RATED SPEED Tolerance mm : + 0.15 CM3/1000s. : 9.0 RATED SPEED Tack travel mm : -1.00		. 42.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONTROL LEVER CONTROL LEVER control lever position degree : 298.0 tolerance degree : + 4.0 guide sleeve travel mm : 10.32 RATED SPEED Tolerance mm : + 0.15	cm3/1000S.	: 12.0	
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1260 guide sleeve travel mm : 10.32 Tolerance mm : + 0.15 CONTROL LEVER control lever position degree : 298.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00			+ cm3/1000S. : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1260 guide sleeve travel mm : 10.32 Tolerance mm : + 0.15 CONTROL LEVER control lever position degree : 298.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00			+
GUIDE SLEEVE TRAVEL Rated speed rpm : 1260		JECTION PUMP	†
GUIDE SLEEVE TRAVEL Rated speed rpm : 1260	WITH GOVERNOR		
GUIDE SLEEVE TRAVEL Rated speed rpm : 1260			+ CONTROL LEVER
position degree : 298.0 Rated speed rpm : 1260			
position degree : 298.0 Rated speed rpm : 1260	GUIDE SLEEVE TRAV	/EL	+ control lever
Rated speed rpm : 1260 + tolerance degree : + 4.0 guide sleeve + travel mm : 10.32 + RATED SPEED Tolerance mm : + 0.15 + rack travel mm : -1.00			A CONTRACTOR OF THE CONTRACTOR
guide sleeve + + + + + + + + + + + + + + + + + +	Rated speed rom	• 1260	
travel mm : 10.32 + RATED SPEED Tolerance mm : + 0.15 + rack travel mm : -1.00			Total wild degree 4.0
Tolerance mm : +− 0.15 + rack travel mm : −1.00	though mm	• 10 32	I DATEN SPEEN
+ Rated cheed rom • 1/45	ioterance mm	; U,15	
i nated speed (piii : 127)			+ kated speed rpm : 1245

Tolerance 1/min	: +- 5	+ Rated speed rpm : 1200
() () () () () () () () () ()	•	rack travel mm : -3.20
rack travel mm	: -9.40	+ Tolerance mm : +- 0.20
Rated speed rpm		
Tolerance 1/min		T MEASUREMENT
Total dice Triain	• • • • • • • • • • • • • • • • • • • •	T MEASOREMENT
rack travel mm	: -12.90	T Detail aread may 1200
		Rated speed rpm : 1200
Tolerance mm		†
Rated speed rpm	: 1500	+ Pressure hPa : 200
		+ rack travel mm : -2.40
		† Tolerance mm : +- 0.20
		+
		+ Pressure hPa : 440
LOW IDLE		+ rack travel mm : −1.10
		Tolerance mm : + 0.05
		+
control lever		Start interlock
position degree	: 252.0	+
tolerance degree	: +- 4.0	Rated speed rpm : > 130
		+ Rated speed rpm : < 275
Testing:		The same of the sa
		Check
Rated speed rpm	: 325	speed 1/min : > 110
rack travel mm		Check
Tolerance mm		+ speed 1/min : < 285
Total ance inti	0.10	
Rated speed rpm	: 225	T
hated speed i pill	. 223	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: < -7.40	T FOEL DELIVERY CHARACTERISTICS
CRI man min.	: < -7.40	T Amanadal massayura
Dadad annad ann	. 700	Aneroid pressure
Rated speed rpm	: 390	+ hPa : 1200
		Rated speed rpm : 850
		Del. quantity
TORQUE CONTROL		+ cm3/1000 strokes : 249.0
		+ Tolerance
Rated speed rpm	: 1200	+ cm3/1000 strokes : + 3.0
		+ Check tolerance
Rated speed rpm		+ cm3/1000s. : +- 6.0
rack travel mm	: -1.0G	+
Tolerance mm	: + 0.10	+ Aneroid pressure
		+ hPa : -
Rated speed rpm	: 700	+ Rated speed rpm : 700
rack travel mm	: -6.00	+ Del. quantity
Tolerance mm	; +- 0.20	+ cm3/1000 strokes : 153.0
		+ Tolerance
Rated speed rpm	: 700	+ cm3/1000 strokes : +- 4.0
rack travel mm		+ Check tolerance
rack travel mm Tolerance mm	: +- 0.20	+ cm3/1000s. : + 8.0
		Aneroid pressure
ANEROID/ALTITUDE		+ hPa : -
COMPENSATOR TEST		Rated speed rpm : 1200
COLUMN TOUT ON TEUT		Del. quantity
		cm3/1000 strokes : 183.0
SETTING		Tolerance
OF117140		- cm3/1000 strokes : +- 1.0
Rated speed rpm	: 1200	+ Check tolerance
Pressure hPa		+ cm3/1000s. : +- 4.0
Fresoure IIFB	. 1200	T (110/1000) 4.0
Descripe LDs		Ţ
Pressure hPa	-	Ť

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s.

: +- 19.0

LOW IDLE

Rated speed rpm 325

Del. quantity cm3/1000 strokes : 33.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s.6.0

Spreed

Tolerance

cm3/1000 strokes 8.0

Check tolerance

cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23,04,97 Test oil : TSO 4113

Combination No. : 0 402 846 302

Injection pump

Pump designation : PE6P120A320RS8520 EP type number : 0 412 826 202

Governor

Governer design. : RQV275...1000PA1269K

Governer no. : 0 421 815 969

Cust. part No. : 1310222/2

Customer-spec. information

Customer : DAF : XF 355 M Motor Power KW : 355.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance *C

Overflow valve : 2 417 413 086

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240 : +- 0.30

Tolerance

Check

tolerance $^{\circ}NW$: +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm: 14.05

Tolerance mm : \leftarrow 0.05

Del. quentity cm3/1000 strokes : 344.0	- Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : +- 1.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 1121 Rack travel in mm : 13.30
Spreed	Tolerance mm : +- 1.30
Tolerance - 6.0 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 12.0	- Rated speed rpm : 980 - Aneroid pressure - hPa : 1500
	- Del. quantity - cm3/1000 strokes : 344.0 - Tolerance
Rated speed rpm : 275	cm3/1000 strokes : + 1.0 Check tolerance
Rack travel in mm : 4.50 Tolerance mm : +- 0.10 Del. quantity	- cm3/1000s. : +- 5.0 - Spreed - Tolerance
<pre>cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +- 3.0</pre>	- cm3/1000 strokes : 6.0 - Check tolerance - cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 6.0	- cm3/1000s. : 12.0 -
Spreed Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
Check tolerance cm3/1000s. : 13.0	control lever position degree : 118.0
(B) SETTING OF INJECTION PUMP	- tolerance degree : +- 4.0 - RATED SPEED
WITH GOVERNOR	- rack travel mm : 13.05 - Rated speed rpm : 1045
GUIDE SLEEVE TRAVEL	- Tolerance 1/min : + 5 - Check - speed 1/min : + 10
Rated speed rpm : 1058 - guide sleeve - travel mm : 9.97	- - rack travel mm : 4.00 - Rated speed rpm : 1140
Tolerance mm : + 0.15	- Tolerance 1/min : +- 15 - Check
Rated speed rpm : 275 guide sleeve travel mm : 2.04	- speed 1/min : +- 20 - - rack travel mm : 0.70
Tolerance mm : +- 0.20	- Tolerance mm : +- 0.70 - Rated speed rpm : 1275
Rated speed rpm : 399 guide sleeve travel mm : 3.39	- - -
Tolerance mm : + 0.25	- LOW IDLE
Rated speed rpm : 1260 guide sleeve travel mm : 13.50	- - -

control lever position degree tolerance degree	: 73.0 : ← 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.50 : ← 0.10
Rated speed rpm	: 175
CRT mm min.	: > 7.00
Rated speed rpm	: 300
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 980 : 14.05 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.05 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.80 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.40 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.45 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 980 : 1500 : 14.05 : ← 0.05
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	980 9.00

MEASUREMENT		
Rated speed rpm	:	980
Pressure hPa rack travel mm Tolerance mm	: +-	750 12.80 0.05
Pressure hPa rack travel mm Tolerance mm	: +-	380 10.30 0.15
Start interlock		

RAC	TEF	RISTICS
:	1	500 750
:		361.0
:	+-	2.0
:	+-	6.0
:		10.0
:		15.0
:		600
:		199.0
:	+-	1.0
:	+	5.0
:		10.0
:		15.0
		: + : + : + : : : : : : : : : : : : : :

LOW IDLE		
lated speed rpm	:	275
Del. quantity cm3/1000 strokes	:	18.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +-	3.0 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	8.0 13.0
CMS/ (UUUS.	:	15.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.04.97 Test oil : ISO 4113

Combination No. : 0 403 436 111

Injection pump

Pump designation : PES6MW100/120RS1143

EP type number : 0 413 406 137

Governor

Governer design. : RQV350...1200MW82-6

Governer no. : 0 420 083 184

Cust. part No. : 3916000

Customer-spec. information

Customer : CUMMINS/US
Motor : 6 CTA-830

Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 017

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : +- 1.0

Prestroke mm : 3.20
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +-0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 10.00

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 12.35
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 141.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance		+ Rated speed rpm + Aneroid pressure	: 1200
cm3/1000s.	: +- 3.0	+ hPa	: 700
Spreed		Del. quantity cm3/1000 strokes	: 141.0
Tolerance		+ Tolerance + cm3/1000 strokes	: + 1.0
cm3/1000 strokes	: 3.5	Check tolerance cm3/1000s.	: + 3.0
Check tolerance	4.0	Spreed	
cm3/1000s.	: 6.0	+ Tolerance + cm3/1000 strokes	: 3.5
		+ Check tolerance + cm3/1000s.	: 6.0
Rated speed rpm	: 350	1 0000.	. 0.0
Rack travel in mm		· I -	
Tolerance mm Del. quantity	: + 0.10	CONTROL LEVER	
cm3/1000 strokes	: 14.0	control lever	
Tolerance cm3/1000 strokes	: +- 2.0	<pre>position degree tolerance degree</pre>	: 98.0 : + 4.0
Check tolerance		+	, , , , , ,
cm3/1000s. Spreed	: +- 4.0	+ RATED SPEED + rack travel mm	: 11.30
Tolerance		+ Rated speed rpm	: 1245
cm3/1000 strokes Check tolerance	: 3.5	† Tolerance 1/min	: +- 5
cm3/1000s.	: 5.5	rack travel mm	: 4.00
		+ Rated speed rpm	
(B) SETTING OF IN	JECTION PLIMP	† Tolerance 1/min	: + 15
WITH GOVERNOR	00011014 1 0111	+ rack travel mm	: 0.50
		Tolerance mm	: + 0.50
GUIDE SLEEVE TRAV	EL	Rated speed rpm	: 1455
Rated speed rpm	: 1250	+	
guide sleeve travel mm	: 7.70	LOW IDLE	
Tolerance mm	: + 0.10	+	
Rated speed rpm	: 350	T control lever	
guide sleeve	4 40	+ position degree	: 67.0
travel mm Tolerance mm	: 1.40 : +- 0.20	tolerance degree	: +- 4.0
		Testing:	
Rated speed rpm guide sleeve	: 800	Rated speed rpm	• 350
travel mm	: 5.20	+ rack travel mm	: 7.20
Tolerance mm		+ Tolerance mm	: + 0.10
Rated speed rpm guide sleeve	: 1350	Rated speed rpm	: 100
travel mm	: 8.80	T CRT mm min.	: > 9.00
Tolerance mm	: + 0.20	+	
		+ Rated speed rpm	: 450
FULL LOAD DELIVER	Y AT FULL LOAD STOP	+	

TORQUE CONTROL

Debad aread are	. 4200	+ Aneroid pressure
Rated speed rpm		+ hPa : 700
rack travel mm		+ Rated speed rpm : 750
Tolerance mm	: ← 0.05	+ Del. quantity
	750	+ cm3/1000 strokes : 145.5
Rated speed rpm	: 750	+ Tolerance
rack travel mm	: 13.05	+ cm3/1000 strokes : + 1.5
Tolerance mm	: ← 0.05	+ Check tolerance
Bankard	4000	+ cm3/1000s. : + 4.0
Rated speed rpm	: 1000	+ Spreed
rack travel mm	: 12.50	+ Tolerance
Tolerance mm	: + 0.10	cm3/1000 strokes : 5.0
Rated speed rpm	: 900	+ Check tolerance + cm3/1000s. : 7.0
rack travel mm	: 12.70	+ cm3/1000s. : 7.0
Tolerance mm	: +- 0.10	Aneroid pressure
TO CET BITCE IIRII	. , 0.10	hPa : -
		Rated speed rpm : 500
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 112.0
TO IN MINORITOR I EVI		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
SETTING		+ Check tolerance
		+ cm3/1000s. : + 3.0
Rated speed rpm	: 500	
Pressure hPa	: -	+
rack travel mm	: 11.35	
Toterance mm	: +- 0. 05	+ STARTING FUEL DELIVERY
		†
Pressure hPa	: 390	Rated speed rpm : 100
Rated speed rpm	: 500	+ Del. quantity
Rated speed rpm rack travel mm	: 500 : 11.55	Del. quantity cm3/1000 strokes : 215.0
Rated speed rpm	: 500	Del. quantity cm3/1000 strokes : 215.0 Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.55	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0
Rated speed rpm rack travel mm	: 500 : 11.55	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.55 : + 0.05	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.55 : + 0.05	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 500 : 11.55 : + 0.05 : 500	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 500 : 11.55 : + 0.05 : 500 : 700	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 500 : 11.55 : + 0.05 : 500	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1600s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1600s. : +- 4.0 Spreed
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1600s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.5
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Check speed 1/min Check	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15 : > 100 : < 220 : > 80	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1600s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.5
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15 : + 0.15	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Check speed 1/min Check	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15 : > 100 : < 220 : > 80	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Check speed 1/min Check	: 500 : 11.55 : + 0.05 : 500 : 700 : 13.05 : + 0.05 : 480 : 12.15 : + 0.15 : + 0.15 : > 100 : < 220 : > 80 : < 240	Del. quantity cm3/1000 strokes : 215.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 28.04.97 : ISO 4113 Test oil Combination No. : 9 400 087 462 Injection pump Pump designation : PES5P120A720LS7175 : 0 EP type number : 0 412 725 816 Governor Governer design. : RQ300/1050PA774-7 : 9 420 080 316 Governer no. Cust. part No. : 0150740502 Customer-spec. intormation Customer : MBB Motor : 0M449 LA Power KW : 220.0 TEST BENCH REQUIREMENTS Inlet line : 4.1 Test oil inlet temp. °C Tolerance °C : + 2.0 Overflow valve : 1 417 413 025 Inlet press. bar : 2.3 Overflow quantity min. L/h 110 Tolerance l/h : ← 10.0

Outside diameter	: 6.0
x inside diameter x length mm	: 3.0 : 1000
REMARKS	
(A) INJECTION PUMP Set equal delivery per values	
BEGINNING OF DELIV	VERY
Test pressure bar Tolerance bar	: 26.0 : + 1.0
Prestroke mm Tolerance mm Check	: 5.25 : + 0.05
tolerance mm	: + 0.10
Rack travel in mm Tolerance mm,	: 10.50 : +- 1.50
Firing order	: 1-3-5-4-2
Phasing Tolerance Check	: 0-72-144-216-288 : + 0.50
tolerance *NW	: 0.75
BASIC SETTING	
Rated speed rpm	: 600
Rack travel in mm Tolerance mm	: 13.70 : + 0.10
Del. quantity cm3/1000 strokes	: 235.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0

Test lines : 1 680 750 067

bar

Test nozzle holde

Opening pressure

Tolerance bar

assembly

: 1 688 901 105

208.5

Connect	+	
Spreed	1	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 9.0	control lever position degree : 109 Rated speed rpm : 600
		Rack travel in mm : 20.00
Rated speed rom	: 300	Tolerance mm : + 0.80
Rack travel in mm	: 5.70	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm	: + 0.10 +	
Del. quantity cm3/1000 strokes	: 14.0	Rated speed rpm : 600
Tolerance	. 14.0	Aneroid pressure hPa : 850
cm3/1000 strokes	: + 3.0	Del. quantity
Check tolerance cm3/1000s.	: + 6.0	cm3/1000 strokes : 235.0
Spreed	: - 0.0	Tolerance cm3/1000 strokes : + 1.0
Tolerance	+	Check tolerance
cm3/1000 strokes	: 8.0	cm3/1000s. : +- 4.0
Check tolerance cm3/1000s.	: 12.0	Spreed Tolerance
(1107 (0000)		cm3/1000 strokes : 5.0
	+	Check tolerance
(B) SETTING OF IN- WITH GOVERNOR	JECTION PUMP	cm3/1000s. : 9.0
GUIDE SLEEVE TRAV	EL	CONTROL LEVER
Rated speed rpm	: 1100	control lever
guide sleeve	+	position degree : 37.0
travel mm Tolerance mm	: 7.00 + : + 0.20 +	tolerance degree : + 4.0
TO LET GITLE TIME	1 0.20	control lever
Rated speed rpm	: 300	position degree : 99.0
guide sleeve	: 3.00	tolerance degree : + 4.0
travel mm Tolerance mm	: +- 0.10	RATED SPEED
, 5 (5), 41,05	+	rack travel mm : 12.70
Rated speed rpm	: 600	Rated speed rpm : 1103
guide sleeve travel mm	: 6.00	Tolerance 1/min : +- 8
Tolerance mm	: + 0.10	rack travel mm : 4.00
	+	Rated speed rpm : 1180
Rated speed rpm guide sleeve	: 1050	Tolerance 1/min : +- 15
travel mm	: 6.65	rack travel mm : 0.75
Tolerance mm	: + 0.15	Tolerance mm : + 0.75
Rated speed rpm guide sleeve	: 1150	Rated speed rpm : 1300
travel mm	: 8.75	
Tolerance mm	: +- 0.25	

LOW IDLE

control lever	+ rack travel mm + Tolerance mm	
position degree : 75.0 tolerance degree : +- 4.0 control lever	+ Pressure hPa + rack travel mm + Tolerance mm	: 0.60
position degree : 12.0 tolerance degree : +- 4.0	Start interlock	0.10
Testing:	Rated speed rpm Rated speed rpm	
Rated speed rpm : 300_	+	
rack travel mm : 5.70 Tolerance mm : + 0.10	+ Check	
ioterance mm : + U.iu	+ speed 1/min + Check	: > 80
rack travel mm : 2.00	+ speed 1/min	: < 240
Rated speed rpm : 385	+	
Tolerance 1/min : + 20	FUEL AFLITHEDY CI	IADACTEDICTICS
Rated speed rpm : 100	+ FUEL DELIVERY CH	MARACIERISTICS
	+ Aneroid pressure	
CRT mm min. $: > 8.50$	† hPa	: 1400
	+ Rated speed rpm	: 1050
TOPOUT CONTROL	Del. quantity	272 5
TORQUE CONTROL	+ cm3/1000 strokes	5 : 232.5
Rated speed rpm : 600	+ Tolerance + cm3/1000 strokes	15
rack travel mm : 13.70	+ Check tolerance	
Tolerance mm : + 0.10	+ cm3/1000s.	
	Spreed	• • • • •
Rated speed rpm : 1050	+ Tolerance	
rack travel mm : 13.80 Tolerance min : ← 0.10	+ cm3/1000 strokes	
Tolerance min : \leftarrow 0.10	+ Check tolerance	
Dated aread pure . 750	+ cm3/1000s.	: 12.0
Rated speed rpm : 750	T Approved procesure	
rack travel mm : 14.60 Tolerance mm : + 0.10	+ Aneroid pressure + hPa	: : 1400
roterarite min o. ro	Rated speed rpm	
	Del. quantity	. 7.50
ANEROID/ALTITUDE	+ cm3/1000 strokes	s : 253.5
COMPENSATOR TEST	+ Tolerance	20010
	+ cm3/1000 strokes	s : +- 2.0
	+ Check tolerance	
	+ cm3/1000s.	: ← 5.0
2-stage LDA setting	+ Spreed	
	† Tolerance	0.0
Rated speed rpm : 600	+ cm3/1000 strokes	s : 8.0
Pressure hPa : 850	+ Check tolerance	. 13.0
MEASUREMENT	t cm3/1060s.	: 12.0
	Aneroid pressure	
Pressure hPa : 340	+ hPa	• -
rack travel mm : -3.20	+ Rated speed rpm	: 500
Tolerance mm : +- 0.10	+ Del. quantity	
	+ cm3/1000 strokes	: 126.0
Pressure hPa : 600	+ Tolerance	
rack travel mm : -1.10	+ cm3/1000 strokes	
Tolerance mm : \leftarrow 0.10	+ Check tolerance	
Pressure hPa : 1160	+ cm3/1000s.	: +- 4.0
Pressure hPa : 1160	+ Spreed	

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 234.5

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 14.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.04.97 Test oil : ISO 4113

Combination No. : 9 400 087 506

Injection pump

Pump designation : PES6P12OA320/3RS3365

EP type number : 9 400 087 092

Governor

Governer design. : RSV450...900P7A628

: 9 420 082 333 Governer no.

Cust. part No. : 3356095

Customer-spec. information Customer : CUMMINS : 6CTAAG Motor Power KW : 240.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

: 1 417 413 047 Overflow valve

Inlet press. bar : 2.3 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar

: 1 680 750 015 Test lines

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.40 : +- 0.05 Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5- 3- 6- 2-Firing order

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.50 : +- 0.10 Tolerance

Check

tolerance °NW : + 0.23

Barrel no. : 1

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 11.85 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 264.0

	1 hal quantity
Tolerance : +- 1.0	the Del. quantity cm3/1000 strokes : 264.0 tolerance
Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : +- 4.0	cm3/1000s. : + 4.0 + Spreed
Spreed	Tolerance cm3/1000 strokes : 5.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 5.0	+ cm3/1000s. : 9.0
Check tolerance : 9.0	CONTROL LEVER
	control lever
Rated speed rpm : 450	position degree : 61.0 tolerance degree : +- 4.0
Rack travel in mm : 4.50	+
Tolerance mm : + 0.10 Del. quantity	t control lever position degree : 111.0
cm3/1000 strokes : 18.0 Tolerance	tolerance degree : + 4.0
$cm3/1000$ strokes : \leftarrow 3.0	Ţ
Check tolerance cm3/1000S. : + 6.0	+ ASSEMBLY GOVERNOR SETTING
Spreed	Raited speed rpm : 959
Tolerance sm3/1000 strokes : 8.0	rack travel mm : 10.80
Check tolerance	Rated speed rpm : 999
cm3/1000s. : 12.0	+ Tolerance 1/min : + 4 + rack travel mm : 4.00
	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
	Rated speed rpm : 1030
GUIDE SLEEVE POSITION	Rated speed rpm : 960
	rack travel mm : 10.80
control lever	Rated speed rpm : 1000
position degree : - 3	+ Tolerance 1/min : +- 4
Rated speed rpm : 800	+ rack travel mm : 4.00
Rack travel in mm: 0.50	rack travel mm : 0.50
Tolerance mm : +- 0.20	Tolerance mm : + 0.50 Rated speed rpm : 1030
governor spring pre-tension	1
click setting x : 5.75	Rated speed rpm : 961
	rack travel mm : 10.80
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1001
Rated speed rpm : 900	+ Tolerance 1/min : +- 4 + rack travel mm : 4.00
Aneroid pressure hPa : -	+ rack travel mm : 0.50
• • • • • • • • • • • • • • • • • • •	+ Tolerance mm : +- 0.50

Rated speed rpm : 1030	+ Tolerance mm : +- 0.10
Rated speed rpm : 962 rack travel mm : 10.80	rack travel mm : 2.00 Rated speed rpm : 485 Tolerance 1/min : + 30
Rated speed rpm : 1002 Tolerance 1/min : +- 4 rack travel mm : 4.00	Rated speed rpm : 100 CRT mm min. : > 19.00
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1030	TORQUE CONTROL Rated speed rpm : 900
Rated speed rpm : 963 rack travel mm : 10.80	rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 550
Rated speed rpm : 1003 Tolerance 1/min : +- 4 rack travel mm : 4.00	rack travel mm : 11.85 Tolerance mm : +- 0.05
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1030	Start interlock
Rated speed rpm : 964 rack travel mm : 10.80	STARTING FUEL DELIVERY
Rated speed rpm : 1004 Tolerance 1/min : + 4 rack travel mm : 4.00	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1030	cm3/1000 strokes : 302.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
LOW IDLE	cm3/1000s. : + 14.0
control lever position degree : 81.0 tolerance degree : + 4.0	LOW IDLE Rated speed rpm : 450
control lever position degree : 31.0 tolerance degree : + 4.0	Del. quantity cm3/1000 strokes : 18.0 Tolerance
Setting point w/out bumper spring	cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm : 450 rack travel mm : 4.00	+ cm3/1000s. : +- 6.0 + Spreed + Tolerance
Tolerance mm : + 0.10	cm3/1000 strokes : 8.0 Check tolerance
Testing:	cm3/1000s. : 12.0
Rated speed rpm : 450 rack travel mm : 4.50	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 28.04.97

Test oil

: ISO 4113

Combination No. : 0 400 463 123

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0 410 483 017

Governor

Governer design. : RSV325...1150A8C275L

Governer no. : 0 420 232 305

Cust. part No. :

Customer-spec. information

Customer : KHD

Motor

: F3L912

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar

: + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 1.95 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1- 3- 2

: 0-120-240 Phasing

Tolerance : +- 0.50

Chack

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 10.65

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 50.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

2.0

Check tolerance

cm3/1000s.

: +-

Spreed

Tolerance

cm3/1000 strokes : 2.5

C24

Rated speed rpm : 325 Rated speed rpm : 325 Rack travel in mm : 8.60 Tolerance mm : + 0.10 Del. quantity Com3/1000 strokes : 12.0 Check tolerance Cm3/1000 strokes : + 1.5 Check tolerance Cm3/1000 strokes : + 3.5 Spreed Tolerance tom3/1000 strokes : 4.0 Check tolerance Cm3/1000 strokes : 4.0 Control Lever Dimension a mm : 1.30 CUIDE SLEEVE TRAVEL Dimension a mm : 1.30 Cuide sleeve Position Control Lever Dosition degree : 70.0 Tolerance mm : 4.00 Rated speed rpm : 1240 Control Lever Dosition degree : 70.0 Tolerance degree : 4.0 Control Lever Dosition degree : 70.0 Tolerance degree : 4.0 Control Lever Dosition degree : 70.0 Tolerance degree : 70.0 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 3.16 Tolerance degree : 70.0 Tolerance mm : 4.00 Rated speed rpm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 3.16 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 3.16 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 325 Tack travel mm : 8.60 Tolerance mm : 4.00 Rated speed rpm : 300 Rated speed rpm : 4.00 Rated sp	Check tolerance cm3/1000S. : 4.0	<u> </u>
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cm3/1000s • 4.0 + Pated speed rnm • 600		Tolerance mm : +- 0.05
+ rack travel mm : 11.95 + Tolerance mm : + 0.05		Pated speed nam · 400
+ Tolerance mm : $+$ 0.05	- CIRD/ 10000 4.0	rack travel mm : 11 95
	-	Tolerance mm : + 0.05

Rated speed rpm 800 11.35 rack travel mm Tolerance mm : + 0.15

Start interlock

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm : Tolerance mm : +- 1.00 Del. quantity

cm3/1000 strokes : 125.0 Tolerance

cm3/1090 strokes : + 7.5

Check tolerance

cm3/1000s.: **←** 10.0

LOW IDLE

325 Rated speed rpm

Del. quantity

12.0 cm3/1000 strokes :

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. 3.5

Spreed

Tolerance

4.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.01.97 Edition Test oil : ISO 4113

Combination No. : 0 400 463 125

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0 410 483 017

Governor

Governer design. : RSV325...1400A8C495L

Governer no. : 0 420 232 302

Cust. part No. :

Customer-spec. information

Customer : KHD : F3L912 Motor

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95 Tolerance min : ⊹- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240 : + 0.50 Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.20 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 50.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 4.0	control lever position degree : 119.0 tolerance degree : + 4.0
Rated speed rpm : 325	RATED SPEED + rack travel mm : 9.20
Rack travel in mm : 9.00 Tolerance mm : + 0.10 Del. quantity	Rated speed rpm : 1445 Tolerance 1/min : + 5
cm3/1000 strokes : 13.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1485
cm3/1000 strokes : + 1.5 Check tolerance	Tolerance 1/min : +- 15
cm3/1000s. : + 3.5 Spreed Tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1700
cm3/1000 strokes : 4.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : 6.0	Rated speed rpm : 1535
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 72.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	Satting point w/out bumper spring
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
	†
Rated speed rpm : 1400 Aneroid pressure	Rated speed rpm : 325 rack travel mm : 9.00 Tolerance mm : + 0.10
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 700
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5 Tolerance cm3/1000 strokes : + 0.5	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5 Tolerance	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : + 30 TORQUE CONTROL
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0 Spreed Tolerance cm3/1000 strokes : 2.5	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1400 rack travel mm : 10.20
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0 Spreed Tolerance	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1400 rack travel mm : 10.20 Tolerance mm : + 0.05 Rated speed rpm : 500
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 50.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.0 Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance	rack travel mm : 9.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 700 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1400 rack travel mm : 10.20 Tolerance mm : + 0.05

Tolerance mm : + 0.10

Start interlock

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 1.00

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 325

Del. quantity cm3/1000 strokes :

13.0

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

cm3/1000s. : +- 3.5

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.04.97 Test oil : ISO 4113

Combination No. : 0 400 464 113

Injection pump

Pump designation : PES4A75D410/3RS1255

EP type number : 0 410 474 966

Governor

Governer design. : RSV325...1150A8C494

: 4L

: 0 420 232 572 Governer no.

Cust. part No. :

Customer-spec. information Customer : KHD

: F4L912 Motor Power KW : 36.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C : +- 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 1.95 Tolerance mm : ← 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 10.65 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 44.0

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s. : +-2.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

	1		
Check tolerance	 ‡	control lever	
cm3/1000s.	: 4.0	position degree	
	+	tolerance degree	: +- 4.0
	Ī	RATED SPEED	
Rated speed rpm	: 325	rack travel mm	: 9.60
	+	Rated speed rpm	: 1195
Rack travel in mm		Tolerance 1/min	: + 5
Tolerance mm Del. quantity	: + 0.10	rack travel mm	: 4.00
cm3/1000 strokes	: 11.0	Rated speed rpm	
Tolerance		Tolerance 1/min	
cm3/1000 strokes	: + 3.0	mark Americk was	0.05
Check tolerance cm3/1000s.	: + 4.5	rack travel mm Tolerance mm	: 0.85 : +- 0.55
Spreed	1	Rated speed rpm	
Tolerance	+	• •	
cm3/1000 strokes Check tolerance	: 2.0		
cm3/1000s.	: 3.0		
	+	LOW IDLE	
423 42222112 422 211	+		
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	control lever	
MILLI GOVERNOR	Ī	position degree	: 72.0
	+	tolerance degree	
CUTAE OF ECUE DOORS	+	0.111	
GUIDE SLEEVE POSIT	1100	Setting point w/o	out bumper spring
	Ī	Rated speed rpm	: 325
control lever	+	rack travel mm	: 8.30
position degree	: - 3	Tolerance mm	: - 0.10
Rated speed rpm	: 800	Testing:	
Rack travel in mm	: 0.50	restrig.	
Tolerance mm	: + 0.20	Rated speed rpm	: 325
		rack travel mm	: 8.80
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	Tolerance mm	: +- 0.10
TOLE COMO DELL'ILM	+	rack travel mm	: 2.00
Rated speed rpm	: 1150	Rated speed rpm	
Aneroid pressure hPa	†	Tolerance 1/min	: +- 30
Del. quantity	· _ I		
cm3/1000 strokes	: 44.0	TORQUE CONTROL	
Tolerance	+		4450
cm3/1000 strokes Check tolerance	: + 0.5	Rated speed rpm rack travel mm	: 1150 : 10.65
cm3/1000s.	: + 2.0 I	Tolerance mm	: + 0.05
Spreed	+		
Tolerance	+	Rated speed rpm	: 500
cm3/1000 strokes Check tolerance	: 2.5	rack travel mm Tolerance mm	: 11.60 : +- 0.10
cm3/1000s.	: 4.0	TOLET CHILLE HITH	0.10
	+	Rated speed rpm	: 850
		rack travel mm	
CONTROL LEVER		Tolerance mm	: +- 0.15
-			

Start interlock

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0

LOW IDLE

325 Rated speed rpm : Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance 2.0 cm3/1000 strokes : Check tolerance cm3/1000s. 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.11.96 Edition : ISO 4113 Test oil

Combination No. : 0 400 836 043

Injection pump

Pump designation : PES6A100D320/3RS2691

: -2

: 9 410 230 028 EP type number

Governor

Governer design. : RQV350...1200A31245R

: 0 420 213 118 Governer no.

Cust. part No. :

Customer-spec. information : CDC Customer Motor : 6CT830

Power KW : 157.0

TEST BENCH REQUIREMENTS

Inlet line : 2

Test oil inlet

temp. °C Tolerance *C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar

Tolerance bar : **←** 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 2.85 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : ├─ 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 10.80

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 115.0

	• • •
Tolongo	guide sleeve
Tolerance cm3/1000 strokes : +- 1.0	travel mm : 8.45 Tolerance mm : + 0.25
Check tolerance	
cm3/1000s. ; +- 3.0	GUIDE SLEEVE POSITION
Spreed	
+	control lever
Tolerance +	position degree : - 1
cm3/1000 strokes : 3.5	Rated speed rpm : 1250
Check tolerance	Rack travel in mm: 16.50
cm3/1000s. : 8.0 +	Tolerance mm : + 1.30
· †	ENLL LOAD DELTHEDY AT FULL LOAD CTOD
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
rated speed (pill : 550	Rated speed rpm : 1200
Rack travel in mm: 4.60	Aneroid pressure
Tolerance rum : → 0.10	hPa : -
Del. quantity	Del. quantity
cm3/1000 strokes : 19.0	cm3/1000 strokes : 115.0
Tolerance	Tolerance
cm3/1000 strokes : + 2.0 +	$cm3/1000$ strokes : \leftarrow 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 4.5 +	$cm3/1000s.$: \leftarrow 3.0
Spreed	Spreed
Tolerance	Tolerance
cm3/1000 strokes : 5.5 Check tolerance	cm3/1000 strokes : 3.5
cm3/1000s. : 9.0 +	Check tolerance cm3/1000s. : 8.0
I 7.0	cm3/100US. : 8.0
1	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	CONTROL LEVER
+	
	control lever
GUIDE SLEEVE TRAVEL	position degree : 44.0
Detect around num . 1200	tolerance degree : +- 4.0
Rated speed rpm : 1200 + guide sleeve +	RATED SPEED
travel mm : 6.90	rack travel mm : 9.80
. 0.70	Rated speed rpm : 1245
Rated speed rpm : 250	Tolerance 1/min : +- 5
guide sleeve	
travel mm : 0.10 +	rack travel mm : 4.00
Tolerance mm : - 0.10 +	Rated speed rpm : 1330
+	Tolerance 1/min : + 15
Rated speed rpm : 350 +	
guide sleeve +	rack travel mm : 0.50
travel mm : 1.25	Tolerance mm : +- 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1400
Rated speed rpm : 450	
guide sleeve	
travel mm : 2.15	
Tolerance mm : +- 0.25	LOW IDLE
+	
Rated speed rpm : 1350 +	
·	

control lever position degree : 13.0 tolerance degree : +- 4.0 Testing: 350 Rated speed rpm : rack travel mm : 4.60 Tolerance mm : + 0.10 2.00 rack travel mm : Rated speed rpm : : **←** 30 Tolerance 1/min Rated speed rpm 100 CRT mm min. : > 9.00 TORQUE CONTROL 1200 Rated speed rpm : rack travel mm : 10.80 : +~ 0.05 Tolerance mm Start interlock Rated speed rpm : > 100 Rated speed rpm : < 290 Check speed 1/min : > 80 Check speed 1/min 300 : < STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 : +- 1.00 Tolerance mm Del. quantity cm3/1000 strokes : 161.0 Tolerance cm3/1000 strokes : + 7.5 Check tolerance cm3/1000s. : +- 10.0 LOW IDLE

Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 5.5
Check tolerance
cm3/1000s. : 9.0

End of test specification sheet

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 19.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.11.96 Edition Test oil : ISO 4113

Combination No. : 0 400 844 091

Injection pump

Pump designation : PES4A90D410RS2666 EP type number : 0 410 894 029

Governor

Governer design. : RQV300...1400AB1065

: 12L

Governer no. : 0 420 212 207

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : 0M364 Motor Power KW : 61.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : x length mm : 600

3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.30 Tolerance mm : + 0.05 Check

tolerance mm: + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.50 Check

tolerance *NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.55 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance cm3/1000 strokes : 3.0	+ rack travel mm : 4.00 + Rated speed rpm : 1550 + Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 7.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1650
Rated speed rpm : 300	<u> </u>
Rack travel in mm : 8.70 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 10.0	LOW IDLE
Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 4.0	control lever position degree : 74.0 tolerance degree : + 6.0
Spreed Tolerance	Testing:
cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0	Rated speed rpm : 300 rack travel mm : 8.70 Tolerance mm : +- 0.10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 100
WITH GOVERNOR	CRT mm min. : > 10.20
	+ Rated speed rpm : 610
	•
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity	TORQUE CONTROL Rated speed rpm : 1400 rack travel mm : 10.55 Tolerance mm : + 0.05
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance	Rated speed rpm : 1400 rack travel mm : 10.55
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance	Rated speed rpm : 1400 rack travel mm : 10.55 Tolerance mm : +- 0.05 Rated speed rpm : 475 rack travel mm : 11.55
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.0	Rated speed rpm : 1400 rack travel mm : 10.55 Tolerance mm : + 0.05 Rated speed rpm : 475 rack travel mm : 11.55 Tolerance mm : + 0.05 Rated speed rpm : 350 rack travel mm : 11.00
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance	Rated speed rpm : 1400 rack travel mm : 10.55 Tolerance mm : + 0.05 Rated speed rpm : 475 rack travel mm : 11.55 Tolerance mm : + 0.05 Rated speed rpm : 350 rack travel mm : 11.00 Tolerance mm : + 0.10
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : + 0.5 Check tolerance cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 7.0	Rated speed rpm : 1400 rack travel mm : 10.55 Tolerance mm : + 0.05 Rated speed rpm : 475 rack travel mm : 11.55 Tolerance mm : + 0.05 Rated speed rpm : 350 rack travel mm : 11.00 Tolerance mm : + 0.10 Start interlock Rated speed rpm : > 100

Aneroid pressure hPa Rated speed rpm	:	- 475	
Del. quantity cm3/1000 strokes	:	46.0	
Tolerance cm3/1000 strokes Check tolerance	: +-	1.5	
cm3/1000s.	: +	3.5	
Aneroid pressure hPa	:	-	
Rated speed rpm Del. quantity cm3/1000 strokes	:	850 49.0	
Tolerance cm3/1000 strokes	: +-	1.5	
Check tolerance cm3/1000s.	: +	3. 5	
	-		
STARTING FUEL DEL		100	
Rated speed rpm rack travel mm	:	100 17.20	
Tolerance mm	: +-	0.20	
Del. quantity			
cm3/1000 strokes	:	83.0	
Tolerance cm3/1000 strokes	• 4-	7.5	
Check tolerance	; —	1.5	
cm3/1000s.	: +-	10.0	
LOW IDLE	·		
Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes	:	10.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000S. Spreed	: +-	4.0	
Tolerance cm3/1000 strokes	:	4.5	
Check tolerance cm3/1000S.	:	7.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

combination No. : 0 400 844 095

Injection pump

Pump designation : PES4A95D410RS2809 EP type number : 0 410 894 993

Governor

Governer design. : RQV300...1400AB1065

: 23L

Governer no. : 0 420 212 227

Cust. part No. :

Customer—spec. information Customer : MB-NFZ

Motor : 0M 364 Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.95 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 6.0	control lever position degree : 113.0 tolerance degree : + 6.0
Rated speed rpm : 300	RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455
Rack travel in mm : 8.50 Tolerance mm : + 0.10 Del. quantity	Tolerance 1/min : + 5 rack travel mm : 4.00
cm3/1000 strokes : 10.0 Tolerance	Rated speed rpm : 1550 Tolerance 1/min : + 15
cm3/1000 strokes : + 2.0 Check tolerance	rack travel mm : 0.50
cm3/1000s. : +- 4.5 Spreed Tolerance	Tolerance mm : +- 0.50 Rated speed rpm : 1670
cm3/1000 strokes : 3.5 Check tolerance	
cm3/1000s. : 5.5	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 75.0
	tolerance degree : + 6.0
GUIDE SLEEVE POSITION	Testing:
control lever position degree : - 1 Rated speed rpm : 1450	Rated speed rpm : 300 rack travel mm : 8.50 Tolerance mm : + 0.10
Rack travel in mm : 16.50	Rated speed rpm : 100
Tolerance mm : + 1.30	CRT mm min. :> 9.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 625
Rated speed rpm : 1400 Aneroid pressure	TORQUE CONTROL
hPa : - Del. quantity	Rated speed rpm : 1400 rack travel mm : 9.95
cm3/1000 strokes : 65.5 Tolerance	Tolerance mm : + 0.05
cm3/1000 strokes : +- 0.5	Rated speed rpm : 400
Check tolerance cm3/1000s. : +- 2.5	+ rack travel mm : 10.80 + Tolerance mm : + 0.10
Spreed Tolerance	+ Rated speed rpm : 670
cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 10.60 Tolerance mm : +- 0.10
cm3/1000s. : 6.0	Rated speed rpm : 1060 rack travel mm : 10.25
CONTROL LEVER	+ Tolerance mm : +- 0.15
	Ť

Start interlock		
Rated speed rpm Rated speed rpm	: > 100 : < 220	
Check speed 1/min	: > 80	
Check speed 1/min	: < 240	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa	: -	
Rated speed rpm	: 400	
Del. quantity cm3/1000 strokes Tolerance	: 49.5	
cm3/1000 strokes Check tolerance	: + 1.5	
cm3/1000s.	: +- 4.0	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		
LOW IDLE		
Rated speed rpm	: 300	
Del. quantity cm3/1000 strokes Tolerance	: 10.0	
cm3/1000 strokes Check tolerance	: +- 2.0	
cm3/1000s. Spreed	: +- 4.5	
Tolerance cm3/1000 strokes	: 3.5	
Check tolerance cm3/1000s.	: 5.5	
CM3/ (UUUS.	. 5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 18.11.96

Test oil

: ISO 4113

Combination No. : 0 400 844 099

Injection pump

Pump designation : PES4A95D41ORS2837

EP type number : 0 410 894 991

Governor

Governer design. : RQV300...1400AB1065

: 29L

Governer no.

: 0 420 212 247

Cust. part No. : 024 074 48 02

Customer-spec. information Customer : MB-NFZ Motor

: OM 364

Power KW

: 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C

Tolerance *C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm 3.25 Tolerance mm : **←** 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 8.85

Tolerance nm : ← 0.05

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.

: **←** 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 8.0	<u> </u>
	+ GUIDE SLEEVE POSITION
Rated speed rpm : 300 Del. quantity	control lever position degree : - 1
cm3/1000 strokes : 12.0 Tolerance	Rated speed rpm : 1450
cm3/1000 strokes : +- 2.0 Check tolerance	Rack travel in mm : 16.50 Tolerance mm : + 1.30
cm3/1000s. : +- 4.5 Spreed	<u> </u>
Tolerance cm3/1000 strokes : 5.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance : 9.0	+ Rated speed rpm : 1400 + Aneroid prassure
	hPa : - Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000 strokes : 72.0 Tolerance
CUIDE OF FOR TONIE	
GUIDE SLEEVE TRAVEL Rated speed rpm : 1453	Spreed
guide sleeve travel mm : 8.77	+ Tolerance + cm3/1000 strokes : 3.5 + Check tolerance
Tolerance mm : + 0.25	cm3/1000s. : 8.0
Rated speed rpm : 300 guide sleeve	
travel mm : 1.35 Tolerance mm : + 0.25	CONTROL LEVER
Rated speed rpm : 921	control lever position degree : 113.0
guide sleeve travel mm : 5.42	tolerance degree : +- 6.0
Tolerance mm : + 0.25	+ RATED SPEED + rack travel mm : 7.85
Rated speed rpm : 367 guide sleeve	+ Rated speed rpm : 1445 + Tolerance 1/min : +- 5
travel mm : 2.41 Tolerance nm : + 0.25	t rack travel mm : 4.00
forerance iim : + 0.25	Rated speed rpm : 1520
Rated speed rpm : 417 guide sleeve	Tolerance 1/min : + 15
travel mm : 3.01	rack travel mm : 0.50
Tolerance mm : + 0.25	Tolerance mm : +- 0.50 Rated speed rpm : 1650
Rated speed rpm : 490 guide sleeve	‡
travel mm : 3.42	†
Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1740	‡

control lever

position degree 68.0 tolerance degree : +-6.0

Setting point w/out bumper spring

Rated speed rpm 300 rack travel mm 5.00 Tolerance mm : **←** 0.10

Testing:

Rated speed rpm 100

CRT mm min. 6.50 : >

Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm 1400 rack travel mm 8.85 Tolerance ma : +- 0.05

Rated speed rpm 500 rack travel mm 8.90 : Tolerance mm : + - 0.10

Start interlock

Rated speed rpm ; > 100 Rated speed rpm : < 220

Check

speed 1/min 80 : >

Check

speed 1/min 240 : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity

52.5 cm3/1000 strokes :

Tolerance

cm3/1000 strokes 2.0

Check tolerance

cm3/1000S.4.0

STARTING FUEL DELIVERY

100 Rated speed rpm rack travel mm

10.50

Tolerance mm : +- 0.20 Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +-7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 844 101

Injection pump

Pump designation : PES4A95D410RS2809 EP type number : 0 410 894 993

Governor

Governer design. : RQV300...1400AB1065

: 23L

Governer no. : 0 420 212 227

Cust. part No. :

Customer—spec. information
Customer : MB-NFZ
Motor : OM 364
Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.95
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance	guide sleeve
	travel mm : 11.50
cm3/1000s. : 6.0	+ Tolerance mm : +- 0.50
	I
	GUIDE SLEEVE POSITION
Rated speed rpm : 300	4
, and a second s	}
Rack travel in mm: 8.60	→ control lever
Tolerance mm : + 0.10	<pre>position degree : - 1</pre>
Del. quantity	+ Rated speed rpm : 1450
cm3/1000 strokes : 10.0	+
Tolerance	+ Rack travel in mm : 16.50
cm3/1000 strokes : + 2.0	+ Tolerance mm : + 1.30
Check tolerance	†
cm3/1000s. : +- 4.5	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 3.5	Detect aread pro 4/00
Check tolerance	Rated speed rpm : 1400
cm3/1000s. : 5.5	+ Aneroid pressure + hPa : -
CIII37 10003	T Del. quantity
	cm3/1000 strokes : 65.5
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : + 1.0
	- Check tolerance
	$\frac{1}{1000}$ + cm3/1000s. : + 3.0
GUIDE SLEEVE TRAVEL	Spreed
	+ Tolerance
Rated speed rpm : 1463	cm3/1000 strokes : 3.5
guide sleeve	† Check tolerance
travel mm : 8.14	+ cm3/1000s. : 6.0
Tolerance mm : +- 0.25	+
	†
Rated speed rpm : 300	
guide steeve	† CONTROL LEVER
travel mm : 1.06	†
Tolerance mm : +- 0.25	+ control lever
Rated speed rpm : 927	position degree : 113.0
Rated speed rpm : 927 guide sleeve	tolerance degree : + 6.0
travel mm : 4.88	T RATED SPEED
Tolerance mm : + 0.25	rack travel mm : 8.90
TOTOL BILLO INII	Rated speed rpm : 1455
Rated speed rpm : 593	+ Tolerance 1/min : +- 5
guide sleeve	
travel mm : 3.46	- rack travel mm : 4.00
Tolerance mm : $+$ 0.25	Rated speed rpm : 1550
	+ Tolerance 1/min : +- 15
Rated speed rpm : 643	+
guide sleeve	+ rack travel mm : 0.50
travel mm : 3.86	+ Tolerance mm : + 0.50
Tolerance mm : \leftarrow 0.25	+ Rated speed rpm : 1670
	†
Rated speed rpm : 610	†
guide sleeve	†
travel mm : 3.76	101.7015
Tolerance mm : + 0.25	+ LOW IDLE
Rated speed rpm : 1810	Ī
Rated speed rpm : 1810	Т

control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Rated speed rpm	: +- 6.0 : 300 : 8.60 : +- 0.10 : 100 : > 9.60	Aneroid pressure hPa : - Rated speed rpm : 630 Del. quantity cm3/1000 strokes : 53.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Aneroid pressure hPa : - Rated speed rpm : 925 Del. quantity cm3/1000 strokes : 59.0 Tolerance cm3/1000 strokes : +- 2.0
TORQUE CONTROL	•	Check tolerance : +- 4.5
Rated speed rpm rack travel mm Tolerance mm	: 9.95	STARTING FUEL DELIVERY
Rated speed rpm rack travel mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 400 : 11.15 : + 0.05 : 630 : 10.85 : + 0.15	Rated speed rpm : 100 rack travel mm : 14.60 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
rack travel mm Tolerance mm	: 10.55	
Start interlock	<u>.</u>	LOW IDLE
Rated speed rpm Rated speed rpm Check	: > 100 : < 220	Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 10.0 Tolerance
speed 1/min Check	: > 80	cm3/1000 strokes : +- 2.0 Check tolerance
speed 1/min	: < 240 -	cm3/1000s. : + 4.5 Spreed Tolerance
FUEL DELIVERY CHA	RACTERISTICS	cm3/1000 strokes : 3.5 Check tolerance
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance		cm3/1000s. : 5.5
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 2.0 : ← 4.5	End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : SU.U4.97

Combination No. : 0 400 844 102

Injection pump

Pump designation : PES4A95D410RS2809 EP type number : 0 410 894 993

Governor

Governer design. : RQV300...1400AB1065

: 27L

Governer no. : 0 420 212 238

Cust. part No. : 024 074 50 02

Customer-spec. information Customer : MB-NFZ Motor : OM 364 Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05 Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

: 0-90-180-270 : + 0.50 Phasing

Tolerance

Check

: +- 0.75 tolerance *NW

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.95

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

: +--2.5 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance -	† travel mm : 11.50
cm3/1000s. : 6.0 -	Tolerance mm : +- 0.50
-	1
	GUIDE SLEEVE POSITION
Dated speed see . 700	T GOIDE SEELVE POSITION
Rated speed rpm : 300 -	†
•	
Rack travel in mm: 8.60 -	tontrol lever
Tolerance mm : + 0.10	position degree : - 1
Del. quantity	Rated speed rpm : 1450
cm3/1000 strokes : 10.0	i Matea Speed i piii : 1430
	Paral 1
Tolerance	Rack travel in mm: 16.50
cm3/1000 strokes : +- 2.0	+ Tolerance mm : +- 1.30
Check tolerance -	+
cm3/1000s, : +- 4.5	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance -	1 TOLE COND DELIVERY AT TOLE LOAD STOT
	Detect aread area 1/00
	Rated speed rpm : 1400
Check tolerance -	† Aneroid pressure
cm3/1000s. : 5.5	hPa : -
	Del. quantity
	- cm3/1000 strokes : 65.5
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR -	cm3/1000 strokes : + 0.5
KIII GOVERNOR	
•	Check tolerance
	+ cm3/1000s. : +- 2.5
GUIDE SLEEVE TRAVEL -	Spreed
-	- Tolerance
Rated speed rpm : 1463 -	cm3/1000 strokes : 3.5
guide steeve	Check tolerance
travel mm : 8.14	cm3/1000s. : 6.0
	- CIID/10003 0.0
Tolerance mm : + 0.25	<u>†</u>
	†
Rated speed rpm : 300 -	
guide sleeve -	CONTROL LEVER
travel mm : 1.06 -	
	-
	control lever
Tolerance mm : +- 0.25	control lever
Tolerance mm : +- 0.25	position degree : 113.0
Tolerance mm : + 0.25 - Rated speed rpm : 927 -	•
Tolerance mm : + 0.25 - Rated speed rpm : 927 - guide sleeve -	position degree : 113.0 tolerance degree : +- 6.0
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED
Tolerance mm : + 0.25 - Rated speed rpm : 927 - guide sleeve -	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 8.90
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 8.90
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve	position degree : 113.0 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : +- 5
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mn : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 0.25 Rated speed rpm : 643 guide sleeve	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 0.25 Rated speed rpm : 643 guide sleeve	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 610 guide sleeve travel mm : 3.76	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1670
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 610 guide sleeve travel mm : 3.76	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1670
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.25 Rated speed rpm : 927 guide sleeve travel mm : 4.88 Tolerance mm : + 0.25 Rated speed rpm : 593 guide sleeve travel mm : 3.46 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 643 guide sleeve travel mm : 3.86 Tolerance mm : + 0.25 Rated speed rpm : 610 guide sleeve travel mm : 3.76	position degree : 113.0 tolerance degree : + 6.0 RATED SPEED rack travel mm : 8.90 Rated speed rpm : 1455 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1550 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1670

guide sleeve

control lever position degree 75.0 tolerance degree : + 6.0 Testing: 300 Rated speed rpm rack travel mm 8.60 Tolerance mm : + - 0.10Rated speed rpm 100 CRT mm min. : > 9.60 Rated speed rpm 625 TORQUE CONTROL Rated speed rpm 1400 rack travel mm 9.95 Tolerance mm 0.05 400 Rated speed rpm 11.15 rack travel mm : + 0.05Tolerance mm Rated speed rpm 670 10.70 rack travel mm Tolerance min : +- 0.10 Rated speed rpm 1060 10.25 rack travel mm Tolerance mm : +- 0.15 Start interlock 100 Rated speed rpm : > 220 Rated speed rpm : < Check speed 1/min : > 80 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 400 Rated speed rpm Del. quantity cm3/1000 strokes : 49.5 Tolerance

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 14.60
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW TOLE

Rated speed rom 360 Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

End of test specification sheet

cm3/1000 strokes : +-

Check tolerance cm3/1000s.

1.5

4.0

: +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 : ISO 4113 Test oil

Combination No. : 0 400 844 105

Injection pump

Pump designation : PES4A95D41ORS2837 EP type number : 0 410 894 991

Governor

Governer design. : RQV300...140GAB1065

: 33L

Governer no. : 0 420 212 249

Cust. part No. : 026 074 08 02

Customer-spec. information Customer : M8-NFZ Motor : 0M 364 Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

: 0-90-180-270 : +- 0.50 Phasing

Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 8.85

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000S. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 8.0	RATED SPEED rack travel mm : 7.85 Rated speed rpm : 1445 Tolerance 1/min : +- 5
Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0	+ rack travel mm : 4.00 + Rated speed rpm : 1525 + Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : + 2.0 Check tolerance	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
cm3/1000s. : + 4.5 Spreed Tolerance	Rated speed rpm : 1670
cm3/1000 strokes : 5.5 Check tolerance	
cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 66.0
	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 300 rack travel mm : 5.00 Tolerance mm : + 0.10
control lever position degree : - 1 Rated speed rpm : 1450	Testing:
Rack travel in mm: 16.50 Tolerance mm: + 1.30	Rated speed rpm : 100 CRT mm min. :> 6.50
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1400 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 1400 rack travel mm : 8.85 Tolerance mm : + 0.05
cm3/1000 strokes : 72.0 Tolerance	Rated speed rpm : 500 rack travel mm : 8.90
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	Tolerance mm : +- 0.10
Spreed Tolerance	Start interlock
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	Rated speed rpm : > 100 Rated speed rpm : < 220
	Check speed 1/min :> 80 Check
CONTROL LEVER	speed 1/min : < 240
control lever position degree : 112.0	FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 53.5
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.50
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : + 7.5
Check tolerance
cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 5.5 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.08.96 : ISO 4113 Test oil

Combination No. : 0 400 844 106

Injection pump

Pump designation : PES4A95D410RS2837 EP type number : 0 410 894 991

Governor

Governer design. : RQV300...1400AB1065

: 33L

: 0 420 212 249 Governer no.

Cust. part No. : 026 074 09 02

Customer-spec. information Customer : MB-NFZ : OM 364 Motor Power KW : 65.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

40 temp. °C : + 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance \mathfrak{sm} : + 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : 1-90-180

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 8.85 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: + 3.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000S.	: 8.0
Rated speed rpm	: 300
Del. quantity cm3/1000 strokes	: 12.0
Tolerance	
cm3/1000 strokes Check tolerance	: + 2.0
c m3/1000 S. Spreed	: +- 4.5
Tolerance cm3/1000 strokes	: 5.5
Check tolerance	
CM5/ (0005.	: 9.0
(B) SETTING OF IN	JECTION PUMP
WITH GOVERNOR	
GUIDE SLEEVE TRAV	/EL
Rated speed rpm	: 1460
guide sleeve	· -
travel mm Tolerance mm	: 8.25 : + 0.05
Rated speed rpm	: 300
guide sleeve travel mm	: 1.05
Tolerance mm	: + 0.25
Rated speed rpm	: 600
guide sleeve travel mm	: 3.80
Tolerance mm	: + 0.25
Rated speed rpm	: 1040
guide sleeve travel mm	: 5.50
Tolerance mm	: + 0.10
GUIDE SLEEVE POSI	TTON
SOINE STEENE LOST	TITOIN
control lever	
position degree Rated speed rpm	: - 1 : 1450
Rack travel in mm	-
THE PARTY OF THE P	: +- 1.30

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1400 : - : 72.0 : + 1.0 : + 3.0 : 3.5 : 8.0
CONTROL LEVER	
control lever position degree tolerance degree	: 112.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 7.85 : 1445 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1525 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1670
LOW IDLE	
control lever position degree tolerance degree	: 66.0 : + 4.0
Setting point w/c	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.00 : +- 0.10

Testing:

Rated speed rpm 100

CRT mm min. : > 6.50

TORQUE CONTROL

Rated speed rpm : 1400 rack travel mm : 8.85 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 8.90 Tolerance mm : + 0.10

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 220

Check

speed 1/min : > 80

Check

speed 1/min : < 240

#52L DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : - Rated speed rpm : 500

cm3/1000 strokes : 53.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.50 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000s.

cm3/1000 strokes : 5.5

Check tolerance

9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.11.96 Edition Test oil : ISO 4113

Combination No. : 0 400 846 559

Injection pump

Pump designation : PES6A90D410RS2710 EP type number : 0 410 896 082

Governor

: RQV300...1400AB1065 Governer design.

: 9L

: 0 420 212 202 Governer no.

Cust, part No.

Customer—spec. information Customer : M8-NFZ Motor : OM 366 Power KW : 92.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 2.30 Prestroke mm Tolerance mm : +- 0.05 Check

tolerance mm

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: +- 0.10

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : ← 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.35 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s.

: +- 2.5

Tolerance -	+
cm3/1000 strokes : 3.0	CONTROL LEVER
Check tolerance - cm3/1000s. : 7.0 -	t control lever
	position degree : 109.0
	tolerance degree : +- 6.0
Rated speed rpm : 300	RATED SPEED
Rack travel in mm : 8.80	rack travel mm : 9.30 Rated speed rpm : 1445
Tolerance mm : +- 0.10 -	Tolerance 1/min : + 5
Del. quantity - cm3/1000 strokes : 12.0 -	+ rack travel mm : 4.00
Tolerance	Rated speed rpm : 1555
cm3/1000 strokes : +- 2.0	Tolerance 1/min : + 15
Check tolerance - cm3/1000s. : +- 4.0 -	rack travel mm : 0.50
Spreed -	Tolerance mm : + 0.50
Tolerance - cm3/1000 strokes : 4.5 -	Rated speed rpm : 1650
Check tolerance -	_
cm3/1000s. : 7.0	
-	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	 -
7	control lever
	position degree : 73.0 tolerance degree : +- 6.0
GUIDE SLEEVE POSITION	-
	Testing:
control lever	Rated speed rpm : 300
position degree : - 1 Rated speed rpm : 1500	rack travel mm : 8.80 Tolerance mm : + 0.10
Rated speed rpm : 1500	- Total ance man
Rack travel in mm: 16.50	Rated speed rpm : 100
Tolerance mm : +- 1.30	CRT mm min. : > 10.30
THE LOAD STATE OF THE LOAD STOP	}
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 655
Rated speed rpm : 1400	TOROUT CONTROL
Aneroid pressure	TORQUE CONTROL
Del. quantity	- Rated speed rpm : 1400_
cm3/1000 strokes : 59.5	- rack travel mm : 10.35 - Tolerance mm : +- 0.05
cm3/1000 strokes : +- 0.5	
Check tolerance - cm3/1000S. : + 2.5	- Rated speed rpm : 500 - rack travel mm : 11.40
cm3/1000s. : + 2.5 - Spreed	Tolerance mm : +- 0.05
Tolerance	Datad annual nam - 750
cm3/1000 strokes : 3.0 - Check tolerance	- Rated speed rpm : 750 - rack travel mm : 11.10
cm3/1000s. : 7.0	- Tolerance mm : + 0.10
1	- - Rated speed rpm : 1100

Tolerance mm	: + 0.15	
Start interlock		
Rated speed rpm	: > 100 : < 220	
Rated speed rpm	: < 220	
Check speed 1/min	: > 80	
Check	; > 60	
speed 1/min	: < 240	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure		
hPa .	: -	
Rated speed rpm Del. quantity	: 500	
cm3/1000 strokes	: 46.0	
Tolerance cm3/1000 strokes	: + 1.5	
Check tolerance	: + 3.5	
Aneroid pressure nPa	: -	
Rated speed rpm	: 750	
Del. quantity cm3/1000 strokes	: 49.0	
Folerance cm3/1000 strokes	: + 1.5	
Check tolerance	•	
cm3/1000s.	: ← 3.5	
STARTING FUEL DEL	IVERY	
Rated speed rpm	: 100	
rack travel mm	: 17.20	
Folerance mm Del. quantity	: + 0.20	
cm3/1000 strokes	: 83.0	
Tolerance cm3/1000 strokes	: ← 7.5	
Check tolerance		
:m3/10100s	: + 10.0	
cm3/1000s.	: ← 10.0	
	: + 10.0	
cm3/1000s. LOW IDLE Rated speed rpm		
OW IDLE	; 300	<u></u>

Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0

End of test specification sheet

cm3/1000 strokes : + 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.04.97 Edition Edition : 29.04.97
Test oil : ISO 4113

Combination No. : 0 400 846 592

Injection pump

Pump designation : PES6A95D410RS2797 EP type number : 0 410 896 900

Governor

Governer design. : RQV300...1200AB1065

: 24L

Governer no. : 0 420 212 228

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : OM 366 Motor Power KW : 92.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 9.95

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Tolerance cm3/1000 strokes : 3.5	<u> </u>
	CONTROL LEVER
Check tolerance cm3/1000s. : 8.0	control lever position degree : 106.0 tolerance degree : + 6.0
Rated speed rpm : 300	RATED SPEED rack travel mm : 8.90
Rack travel in mm : 8.80 Tolerance mm : + 0.20 Del. quantity	Rated speed rpm : 1245 Tolerance 1/min : +- 5
cm3/1000 strokes : 10.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1375
cm3/1000 strokes : + 2.0 Check tolerance	Tolerance 1/min : + 15
cm3/1000s. : +- 4.5 Spreed Tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
cm3/1000 strokes : 5.5 Check tolerance	Added Speed (piii . 1330
cm3/1000s. : 9.0	
(3) SETTING OF INJECTION PUMP WITH GOVERNOR	+ LOW IDLE
	control lever position degree : 75.0
GUIDE SLEEVE POSITION	tolerance degree : +- 6.0 Testing:
control lever position degree : - 1 Rated speed rpm : 1450	Rated speed rpm : 300 rack travel mm : 8.80 Tolerance mm : + 0.20
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Rated speed rpm : 100
4	+ CRT mm min. : > 9.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 575
Rated speed rpm : 1200 Aneroid pressure hPa : -	TORQUE CONTROL
Del. quantity cm3/1000 strokes : 59.5 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1200 rack travel mm : 9.95 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : +- 3.0 Spreed	Rated speed rpm : 500 rack travel mm : 10.80 Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : 3.5 Check tolerance	Rated speed rpm : 840 rack travel mm : 10.35 Tolerance mm : + 0.15
cm3/1000s. : 8.0	‡
	+ Start interlock

Rated speed rpm :> 100 Rated speed rpm : < 220 Check speed 1/min 80 : > Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 500 Rated speed rpm Del. quantity 45.5 cm3/1000 strokes : Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY 100 Rated speed rpm 14.80 rack travel mm Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes 7.5 Check tolerance cm3/1000s. : + 10.0 LOW IDLE 300 Rated speed rpm Del. quantity 10.0 cm3/1000 strokes Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes 5.5 Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 846 614

Injection pump

Pump designation : PES6A95D41ORS2844 EP type number : 0 410 896 893

Governor

Governer design. : RQV300...1400AB1065

: 31L

Governer no. : 0 420 212 246

Cust. part No. : 024 074 9702

Customer—spec. information Customer : MB-NFZ Motor : OM 366 Power KW : 97.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

DEMARKO

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 8.75

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 74.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

E07

Tolerance cm3/1000 strokes : 3.5	t control lever
Check tolerance cm3/1000s. : 6.0	position degree : - 1 Rated speed rpm : 1450
	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.50	T FOLL LOAD DECIVERY AT FOLL LOAD STOP
Tolerance mm : + 0.10	+ Rated speed rpm : 1400
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 10.0	† hPa : -
Tolerance cm3/1000 strokes : +- 2.0	+ Del. quantity + cm3/1000 strokes : 74.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 4.5	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. + 3.0
cm3/1000 strokes : 3.5	Spreed
Check tolerance cm3/1000s. : 5.5	Tolerance cm3/1000 strokes : 3.5
CIID/ 10003	+ Check tolerance
	+ cm3/1000s. : 6.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	t control lever
Rated speed rpm : 1450	+ position degree : 113.0
guide sleeve	tolerance degree : + 4.0
travel mm : 8.10	+
Tolerance mm : + 0.05	+ RATED SPEED
Rated speed rom : 300	+ rack travel mm : 7.75
Rated speed rpm : 300 guide sleeve	+ Rated speed rpm : 1445 + Tolerance 1/min : + 5
travel mm : 1.10	Total arice mining : 7- 3
Tolerance mm : + 0.25	+ rack travel mm : 4.00
	+ Rated speed rpm : 1525
Rated speed rpm : 925	+ Tolerance 1/min : + 15
guide sleeve	T nack that of the
travel mm : 4.80 Tolerance mm : + 0.20	rack travel mm : 0.50 Tolerance mm : + 0.50
rocci di lee min	+ Rated speed rpm : 1650
Rated speed rpm : 590	+
guide sleeve	†
travel mm : 3.50	†
Tolerance mm : + 0.25	+ LOW IDLE
Rated speed rpm : 640	T LOW IDEE
guide sleeve	+
travel mm : 3.90	+ control lever
Tolerance mm : +- 0.25	position degree : 64.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Testing:

Rated speed rpm :

300

rack travel mm	: 4.50
Tolerance mm	: +- 0.10
Rated speed rpm	: 100
CRT mm min.	: > 6.00
TORQUE CONTROL	
Rated speed rpm	: 1400
rack travel mm	: 8.75
Tolerance mm	: +- 0.05
Rated speed rpm	
rack travel mm Tolerance mm	: 8.80 : +- 0.15
TOTAL GIRES 1887	
Start interlock	
Dated speed no-	: > 100
Rated speed rpm Rated speed rpm	: < 220
Check speed 1/min	: > 80
Check	
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	500
Del. quantity	
cm3/1000 strokes	: 57.0
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance	
cm3/1000s.	: ← 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel nm	: 11.00
Tolerance mm Del. quantity	: + 0.20
cm3/1000 strokes	: 88.0
Tolerance	
Tolerance cm3/1000 strokes Check tolerance	: 5.0

: 300
: 10.0
: +- 2.0
: +- 4.5
: 3.5
: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.11.96 Test oil : ISO 4113

Combination No. : 0 400 846 616

Injection pump

Pump designation : PES6A95D41ORS2844 EP type number : 0 410 896 893

Governor

Governer design. : RQV300...1400AB1065

: 32L

Governer no. : 0 420 212 248

Cust. part No. : 025 074 5902

Customer—spec. information Customer : MB—NFZ Motor : OM 366 Power KW : 95.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.25 Tolerance mm : + 0.05

Check

tolerance mm : → 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.70 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 67.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Tolerance cm3/1000 strokes : 3.5	†
	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 6.0	‡
	- control lever - position degree : - 1
	+ Rated speed rpm : 1450
Rated speed rpm : 300	+ + Rack travel in mm : 16.50
Rack travel in mm : 5.90 Tolerance mm : + 0.10	Tolerance mm : +- 1.30
Del. quantity	I
cm3/1000 strokes : 10.0 Tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 2.0 Check tolerance	Rated speed rpm : 1400 Aneroid pressure
cm3/1000s. : +- 4.5	+ hPa : -
Spreed Tolerance	+ Del. quantity + cm3/1000 strokes : 67.0
cm3/1000 strokes : 3.5 Check tolerance	<pre>+ Tolerance + cm3/1000 strokes : ← 1.0</pre>
cm3/1000s. : 5.5	+ Check tolerance
	+ cm3/1000s. : +- 3.0 + Spreed
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Tolerance + cm3/1000 strokes : 3.5
	+ Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : 6.0 +
Rated speed rpm : 1452	Ī
guide sleeve travel mm : 8.03	+ CONTROL LEVER
Tolerance mm : + 0.25	- control lever - position degree : 116.0
Rated speed rpm : 300	tolerance degree : + 4.0
guide sleeve travel mm : 1.06	RATED SPEED
Tolerance mm : + 0.25	+ rack travel mm : 8.70 + Rated speed rpm : 1445
Rated speed rpm : 593 guide sleeve	Tolerance 1/min : + 5
travel mm : 3.46	rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1535 + Tolerance 1/min : +- 15
Rated speed rpm : 643	+
muide elegve	rack travel min . 0.50
guide sleeve travel mm : 3.84	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 3.84 Tolerance mm : + 0.25 Rated speed rpm : 1030	Tolerance mm : + 0.50
travel mm : 3.84 Tolerance mm : + 0.25 Rated speed rpm : 1030 guide sleeve travel mm : 5.33	Tolerance mm : + 0.50 Rated speed rpm : 1650
travel mm : 3.84 Tolerance mm : + 0.25 Rated speed rpm : 1030 guide sleeve travel mm : 5.33 Tolerance mm : + 0.25	Tolerance mm : + 0.50
travel mm : 3.84 Tolerance mm : + 0.25 Rated speed rpm : 1030 guide sleeve travel mm : 5.33 Tolerance mm : + 0.25 Rated speed rpm : 1820	Tolerance mm : + 0.50 Rated speed rpm : 1650 LOW IDLE
travel mm : 3.84 Tolerance mm : + 0.25 Rated speed rpm : 1030 guide sleeve travel mm : 5.33 Tolerance mm : + 0.25	Tolerance mm : + 0.50 Rated speed rpm : 1650

Testing:

Rated speed rpm 300 5.90 rack travel mm Tolerance mm : +- 0.10

100 Rated speed rpm

CRT mm min. : > 6.50

TORQUE CONTROL

1400 Rated speed rpm rack travel mm 9,70 Tolerance mm : **←** 0.05

Rated speed rpm 500 : 9.75 rack travel mm : +- 0.15 Tolerance mm

Start interlock

Rated speed rpm 100 ; > Rated speed rpm : < 220

Check

speed 1/min : > 80 Check

speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 50.0

Tolerance

cm3/1000 strokes : +-

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 12.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 88.0 Tolerance

cm3/1000 strokes : +-5.0

Check tolerance

: +-cm3/1000s.8.0

LOW IDLE

Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes	:	10.0	
cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed Tolerance			
cm3/1000 strokes	:	3.5	
Check tolerance cm3/1000S.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.04.97 Edition Test oil : ISO 4113

Combination No. : 0 400 864 074

Injection pump

Pump designation : PES4A85D410/3RS2638

EP type number : 0 410 884 950

Governor

Governer design: : RSV325...1150A0C2168

: -4L

Governer no. : 0 420 232 524

Cust. part No. :

Customer-spec. information

Customer : KHD

: BF4L913T Motor Power KW : 60.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.55 Tolerance mm : + 0.05

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 11.45

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

: +- 2.5 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

+	
Check tolerance cm3/1000s. : 5.0	CONTROL LEVER
	control lever position degree : 105.0
Rated speed rpm : 325	tolerance degree : + 4.0
Rack travel in mm: 9.20 Tolerance mm: + 0.10	RATED SPEED rack travel mm : 10.40
Del. quantity cm3/1000 strokes : 19.0 Tolerance	Rated speed rpm : 1195 Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1285
cm3/1000s. : + 5.0 Spreed	Tolerance 1/min : + 15
Tolerance cm3/1000 strokes : 2.5 Check tolerance	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : 4.5	Rated speed rpm : 1500 rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1310
WITH GOVERNOR	· ·
	LOW IDLE
GUIDE SLEEVE POSITION	o control love
control lever	control lever position degree : 80.0
position degree : - 3	tolerance degree : +- 4.0
Rated speed rpm : 800	
+	Setting point w/out bumper spring
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	Rated speed rpm : 325
governor spring pre-tension	rack travel mm : 8.70 Tolerance mm : + 0.10
click setting x : 4.00	Testing:
	Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 9.20 Tolerance mm : +- 0.10
Rated speed rpm : 1150	Tolerance mm : +- 0.10
Aneroid pressure	rack travel mm : 2.00
hPa : -	Rated speed rpm : 600
Del. quantity	Tolerance 1/min : +- 30
cm3/1000 strokes : 72.0 +	Rated speed rpm : 100
cm3/1000 strokes : + 0.5 Check tolerance	CRT mm min. : > 19.50
cm3/1000s. : $+$ 2.5	
Spreed Tolerance Tolerance	TORQUE CONTROL
cm3/1000 strokes : 3.0 + Check tolerance	Rated speed rpm : 1150
cm3/1000s. : 5.0	rack travel mm : 11.45
+	Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 12.70 Tolerance mm : + 0.10

Rated speed rpm : 800 rack travel mm : 12.60 Tolerance mm : + 0.05

Rated speed rpm : 940 rack travel mm : 12.05 Tolerance mm : + 0.05

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : - 800

Del. quantity

cm3/1000 strokes : 72.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : \sim 0.75

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : + 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 325

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : \leftarrow 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.5

End of test specification shoot

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 29,04,97 : ISO 4113

Combination No.

: 0 400 866 125

Injection pump

Pump designation : PES6A85D410/3RS2761

EP type number : 0 410 886 895

Governor

Governer design. : RSV325...1150A3c810

Governer no. : 0 420 232 608

Cust. part No.

Customer-spec. information Customer : KHD

: BF6L913 Motor Power KW : 112.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C

Tolerance °C

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure ban : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.55 : +- 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-69-129-180-240

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 12.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000S. 2.5

Tolerance cm3/1000 strokes : 3.0 Check tolerance	- cm3/1000s. : 7.0
cm3/1000s. : 7.0	CONTROL LEVER
Rated speed rpm : 325	- control lever - position degree : 103.0 - tolerance degree : +- 4.0
Rack travel in mm: 7.60 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 12.0 Tolerance	RATED SPEED rack travel mm : 11.10 Rated speed rpm : 1195 Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15
Spreed Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.0	Tolerance mm : + 0.55 Rated speed rpm : 1410
	rack travel mm : 4.00 Rated speed rpm : 1255
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 67.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	- Setting point w/out bumper spring - Rated speed rpm : 325
governor spring	- Rated speed rpm : 325 - rack travel mm : 7.10 - Tolerance mm : + 0.10
pre-tension click setting x : 4.00	- - Testing: -
FULL LOAD DELIVERY AT FULL LOAD STOP	- Rated speed rpm : 325 - rack travel mm : 7.60 - Tolerance mm : +- 0.10
Rated speed rpm : 1150 Aneroid pressure hPa : 700 Del. quantity	rack travel mm : 2.00 Rated speed rpm : 460 Tolerance 1/min : +- 30
cm3/1000 strokes : 85.0 + Tolerance	- Rated speed rpm : 100
cm3/1000 strokes : +- 0.5 Check tolerance cm3/1000S. : +- 2.5	- CRT mm min. : 20.25
Spreed Tolerance cm3/1000 strokes : 3.0	TORQUE CONTROL

+ Check tolerance

Rated speed rpm	: 1150
rack travel mm	: 12.15
Tolerance mm	: + 0.05
Rated speed rpm	: 500
rack travel mm	: 12.80
Tolerance mm	: +- 0.10
Rated speed rpm	: 750
rack travel mm	: 12.80
Tolerance mm	: ← 0.10
Rated speed rpm	: 855
rack travel mm	: 12.60
Tolerance mm	: + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	

SETTING

Rated speed rpm	:		500
Pressure hPa	:		700
rack travel mm	:		12.80
Tolerance mm	:	+-	0.05

Pressure hPa	:	~
Rated speed rom	:	500
rack travel min	:	11.60
Tolerance mm	: +	- 0.05

MEASUREMENT

Ruted	speed	rpm	:	500
Nated	Specu	Pill	•	

Pressure hPa	:	350
rack travel mm	:	11.95
Tolerence mm		- 0.05

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid	pressure

:	700
:	750
:	88.0
	:

Tolerance cm3/1000 strokes : +-1.5

Check tolerance cm3/1000s. 3.5

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity cm3/1000 strokes	:	65.0
Tolerance cm3/1000 strokes Check tolerance	: +-	1.5
cm3/1000s.	: +-	3.5

STARTING FUEL DELIVERY

rack travel mm Tolerance mm	: 100 : 17.80 : + 0.20
Del. quantity cm3/1000 strokes Tolerance	: 120.0
cm3/1000 strokes Check tolerance	: ← 7.5
cm3/1000s.	: + 10.0

LOW IDLE

Rated speed rpm Del. quantity	:	325	
cm3/1000 strokes	:	12.0	
Tolerance cm3/1000 strokes	: 4-	2.0	
Check tolerance cm3/1000S.	: +-	4.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	4.5	
cm3/1000s.	:	7.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 03.06.96 : ISO 4113

Combination No. : 0 400 866 188

Injection pump

Pump designation : PES6A100D320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV425...750A4C2213

: 5R

Governer no.

: 0 420 233 326

Cust. part No. :

Customer-spec. information

Customer : CDC

: 6 CT 8.3 L Motor

: 135.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 2.0

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

Test Lines

: 1 680 750 014

Outside diameter : 6.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x inside diameter :

x length mm :

per values _____

BEGINNING OF DELIVERY

28.0 Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm

: +- 0.05 Tolerance mm Check

tolerance mm : \leftarrow 0.10

2.0

600

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

*NW after s.o.d. : 10.00

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

750

Rack travel in mm: 14.05

Tolerance mm : \leftarrow 0.05

4	Tolerance
Del. quantity	cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 145.5	Check tolerance
	cm3/1000s. : +- 3.5
Tolerance +	Spreed
cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 4.0
Check tolerance	Check tolerance
cm3/1000s. : + 3.5	cm3/1000s. : 6.5
<u> </u>	
Spreed	
Tolerance	CONTROL LEVER
cm3/1000 strokes : 4.0	CONTROL LEVER
4	control lever
Check tolerance	position degree : 90.0
cm3/1000s. : 6.5	tolerance degree : +- 4.0
	DATEN COFEN
I	RATED SPEED rack travel mm : 13.00
Rated speed rpm : 425	Rated speed rpm : 800
The control of the co	Tolerance 1/min : +- 5
Rack travel in mm: 6.10	
Tolerance mm : + 0.10 +	rack travel mm : 4.00
Del. quantity +	Rated speed rpm : 840
cm3/1000 strokes : 20.0 +	Tolerance 1/min : + 15
Tolerance	
cm3/1000 strokes : + 2.0	rack travel mm : 0.85
Check tolerance + 4.5 + 4.5	Tolerance mm : +- 0.55 Rated speed rpm : 950
cm3/1000s. : + 4.5 + 5	Rated speed rpm : 950
Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : 6.0	Rated speed rpm : 845
Check tolerance	
cm3/1000s. : 8.0	
+	
+) All 751 7
(B) SETTING OF INJECTION PUMP	LOW IDLE
WITH GOVERNOR	
1	control lever
	position degree : 80.0
GUIDE SLEEVE POSITION +	tolerance degree : +- 4.0
†	
	Setting point w/out bumper spring
control lever + position degree : - 3 +	Rated speed rpm : 425
position degree : -3 + Rated speed rpm : 800 +	rack travel mm · 5 AN
hated speed (piii : ooo	rack travel mm : 5.60 Tolerance mm : + 0.10
Rack travel in mm: 0.50	
Tolerance mm : + 0.20 +	Testing:
+	
THE LOSS SELECTION AT SHIP LOSS STOP	Rated speed rpm : 425
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 6.10 Tolerance mm : + 0.10
Rated speed rpm : 750	roterance man : TO U. IU
Rated speed rpm : 750 + Aneroid pressure +	Rated speed rpm : 100
hPa : -	Tatoa opera i piir 1 100
Del. quantity	CRT mm min. :> 19.50
cm3/1000 strokes : 145.5	

TORQUE CONTROL

Rated speed rpm : 750 rack travel mm : 14.05 Tolerance mm : + 0.05

Start interlock

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 147.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0

LOW IDLE

Rated speed rpm 425 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 866 219

Injection pump

Pump designation : PES6A95D12ORS2860 EP type number : 0 410 896 889

Governor

Governer design. : RSV410...1050A0C2260

: -3R

Governer no. : 0 420 233 344

Cust. part No. : 32 82 684

Customer—spec. information Customer : CUMMINS Motor : 6 BT Power KW : 113.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.15
Tolerance mm : ÷ 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm ; + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing . 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 11.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 10.90 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 97.0

3/1000 strokes : 97.0

Tolerance	† Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0	Spreed Tolerance
Spreed	cm3/1000 strokes : 3.5
Tolerance	Check tolerance : 8.0
cm3/1000 strokes : 3.5	
Check tolerance	
cm3/1000s. : 8.0	CONTROL LEVER
	control lever
Rated speed rpm : 430	position degree : 90.0 tolerance degree : + 4.0
rated speed (piii : 400	- toterance degree . • 4.b
Rack travel in mm: 7.20	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 9.90
Del. quantity - cm3/1000 strokes : 21.0 -	- Rated speed rpm : 1095 - Tolerance 1/min : +- 5
Tolerance	- rocerance triming
cm3/1000 strokes : +- 2.0 -	- rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1140
cm3/1000s. : +- 4.5 Spreed	Tolerance 1/min : + 15
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 5.5	- Tolerance mm : +- 0.55
Check tolerance - cm3/1000s. : 9.0 -	Rated speed rpm : 1330
CIID/10003	rack travel mm : 4.00
<u> </u>	Rated speed rpm : 1175
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
-	1011
GUIDE SLEEVE POSITION -	LOW IDLE
	control lever
control lever position degree : -3	- position degree : 70.0 - tolerance degree : + 4.0
Rated speed rpm : 800	-
+	 Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	- Rated speed rpm : 430
Tolerance mm : + 0.20	- rack travel mm : 430
governor spring	- Tolerance mm : + 0.10
pre-tension +	
click setting x : 1.75	- Testing:
	- Rated speed rpm : 430
FULL LOAD DELIVERY AT FULL LOAD STOP	- rack travel mm : 7.20
Pated aread pro 4 4050	- Tolerance mm : + 0.10
Rated speed rpm : 1050 Aneroid pressure	- - rack travel mm : 2.00
hPa : 1100	- Rated speed rpm : 590
Del. quantity	Tolerance 1/min : + 30
cm3/1000 strokes : 97.0	-

Rated speed rpm : 100 CRT mm min. : > 19.50TORQUE CONTROL Rated speed rpm 1050 10.90 rack travel mm Tolerance mm : +- 0.05 : 450 Rated speed rpm rack travel mm 11.80 Tolerance mm : + 0.10Rated speed rpm : 550 rack travel mm : 11.50 Tolerance mm : + 0.10ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 450 Pressure hPa 1100 : 11.80 rack travel mm Tolerance mm : +- 0.05 Pressure hPa Rated speed rpm 500 rack travel mm 9.80 : : + 0.10Tolerance mm **MEASUREMENT** Rated speed rpm : 450 42C Pressure hPa 10.10 rack travel mm : +- 0.10 Tolerance mm Pressure hPa 10.95 rack travel mm Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1100

450

Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s.3.0 : +-Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 67.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : +- 3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 14.00 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 115.0 folerance cm3/1000 strokes : + 7.5Check tolerance cm3/1000s. : +- 10.0 LOW IDLE Rated speed rpm : 430 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance : + 4.5 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

End of test specification sheet

Rated speed rpm

cm3/1000 strokes : 98.0

Del. quantity

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30,04,97 Edition Test oil : ISO 4113

Combination No. : 0 400 874 255

Injection pump

Pump designation : PES4A95D410RS2685 : 0 410 894 996 EP type number

Governor

Governer design. : RSV400...1000A1C2278

Governer no. : 0 420 232 602

Cust. part No. : 9275740

Customer-spec. information Customer : LIEBHERR Motor : D904 T Power KW : 96.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0 x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.75 Tolerance mm : + 0.05Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

: +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

Beginning of delivery differende

and maximum rack

travel 9.00 Tolerance mm : + 0.50 Difference * CS :

BASIC SETTING

1000 Rated speed rpm

Rack travel in mm : 13.45 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 129.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S.	: + 3.0	Check tolerance cm3/1000s. : +- 3.0 Spread
Spreed		Tolerance cm3/1000 strokes : 3.5 Check tolerance
Tolerance cm3/1000 strokes	: 3.5	cm3/1000s. : 8.0
Check tolerance cm3/1000S.	: 8.0	CONTROL LEVER
Rated speed rpm	: 400	control lever position degree : 98.0 tolerance degree : +- 4.0
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10	RATED SPEED rack travel mm : 12.45 Rated speed rpm : 1045 Tolerance 1/min : + 5
	: + 2.0 : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1080 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes Check tolerance	: 5.5	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250
cm3/1000s.	: 9.0 1	rack travel mm : 4.00 Rated speed rpm : 1110
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	
GUIDE SLEEVE POSIT	ION	LOW IDLE
control lever position degree Rated speed rpm	: - 3 : 800	<pre>control lever position degree : 69.0 tolerance degree : +- 4.0</pre>
Rack travel in mm Tolerance mm		Setting point w/out bumper spring Rated speed rpm : 400
governor spring pre-tension	+	rack travel mm : 6.70 Tolerance mm : + 0.10
click setting x	: 2.25	Testing:
FULL LOAD DELIVERY	+	Rated speed rpm : 400 rack travel mm : 7.20 Tolerance mm : + 0.10
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: - ‡	rack travel mm : 2.00 Rated speed rpm : 570 Tolerance 1/min : +- 30
Tolerance cm3/1000 strokes	+	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 13.50 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 13.50 : ← 0.10
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 12.10 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 470 : 13.10 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 410 : 12.70 : + 0.10
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 119.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 4.0
	· *** 4.U
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 500
cm3/1000 strokes	• 9/. 0

Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +-3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.25 Tolerance mm : **←** 0.75 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : +- 7.5Check tolerance cm3/1000s. : +- 10.0 LOW IDLE Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

End of test specification sheet

cm3/1000 strokes :

94.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 30.04.97

Test oil

: ISO 4113

Combination No.

: 0 400 876 337

Injection pump

Pump designation : PES6A90D410RS2710

EP type number : 0 410 896 082

Governor

Governer design. : RSV350...1400A0C1135

: -2L

Governer no.

: 0 420 232 473

Cust. part No. :

Customer-spec. information

Customer

: MB-NFZ

Motor

: CM 366

Power KW

96.0

TEST BENCH REQUIREMENTS

Inlet line

: 2.3

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 1 419 992 198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 089

Outside diameter :

8.0

x inside diameter : 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Toterance bar : +- 1.0

2.30 Prestroke mm : + 0.05 Tolerance mm

Check

tolerance min

: +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing : 0-60-120-180-240

Tolerance

: + 0.50

Check

tolerance °NW

: **←** 0.75

BASIC SETTING

Rated speed rpm

: 1400

Rack travel in mm: 10.85

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes :

61.0

Tolerance

cm3/1000 strokes : +-

0.5

Check tolerance

cm3/1000s.

: **←** 2.5

Tolerance cm3/1000 strokes : 3.0	Check tolerance cm3/1000s. : 7.0
Check tolerance cm3/1000s. : 7.0	
	- CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 113.0
Rack travel in mm : 9.10	- tolerance degree : +- 4.0 -
Tolerance mm : +- 0.10	- RATED SPEED
Del. quantity cm3/1000 strokes : 12.0 Tolerance	- - rack travel mm : 0.85 - Tolerance mm : +- 0.55
cm3/1000 strokes : + 2.0 Check tolerance	- Rated speed rpm : 1630
cm3/1000s. : +- 4.0 Spreed	- rack travel mm : 4.00 - Rated speed rpm : 1530
Tolerance cm3/1000 strokes : 4.5	- - rack travel mm : 9.80
Check tolerance	- Rated speed rpm : 1445
cm3/1000s. : 7.0	- Tolerance 1/min : +- 5
	- ASSEMBLY GOVERNOR SETTING
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- - Rated speed rpm : 1435
WITH GOVERNOR	rack travel mm : 9.80
	- - Rated speed rpm : 1479
GUIDE SLEEVE POSITION	- Tolerance 1/min : + 4
<u>†</u>	- rack travel mm : 4.00 -
control lever	Potent mand man 4/7/
position degree : - 3 + Rated speed rpm : 800 +	- Rated speed rpm : 1436 - rack travel mm : 9.80
+	•
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	- Rated speed rpm : 1480 - Tolerance 1/min : +- 4
	rack travel mm : 4.00
governor spring + pre-tension +	•
click setting x : 6.00	Rated speed rpm : 1437
	- rack travel mm : 9.80 -
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1481
Rated speed rpm : 1400	· Tolerance 1/min : +- 4 · rack travel mm : 4.00
Aneroid pressure	- Tack travet inn
hPa : - + Del. quantity +	· Rated speed rpm : 1438
cm3/1000 strokes : 61.0	rack travel mm : 9.80
Tolerance + 0.5	· Rated speed rpm : 1482
cm3/1000 strokes : + 0.5 + Check tolerance	Tolerance 1/min : +- 4
cm3/1000s. : + 2.5	rack travel mm · : 4.00
Spreed + Tolerance +	
cm3/1000 strokes : 3.0	Rated speed rpm : 1439 rack travel mm : 9.80
Т	TAUK CTAYCE IIRII . 7.00

Rated speed rpm Tolerance 1/min rack travel mm	: 1483 : + 4 : 4.00
Rated speed rpm rack travel mm	: 1440 : 9.80
Rated speed rpm Tolerance 1/min rack travel mm	: 1484 : + 4 : 4.00
LOW IDLE	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	; 350 : 9.10 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 500 : + 30
Rated speed rpm	: 100
CRT mm min.	: > 19.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1400 : 10.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.90 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 950 : 11.55 : ← 0.15
Start interlock	
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	;
Rated speed rpm	: 500

	•	
Check tolerance cm3/1000s.	: +	3.5
Tolerance cm3/1000 strokes	: +-	1.5
Del. quantity cm3/1000 strokes	:	51.5

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 17.10
Tolerance mm	: +- 0.20
Del. quantity	
0110. 1000 00101100	: 83.0
Tolerance	
cm3/1000 strokes	: +- 7.5
Check tolerance	
cm3/1000s.	: ← 10.0

LOW IDLE

Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	12.0	
Tolerance cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s. Spreed	: +-	4.0	
Tolerance cm3/1000 strokes	:	4.5	
Check tolerance cm3/1000s.	:	7.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 876 397

Injection pump

Pump designation : PES6A95D410RS2797 EP type number : 0 410 896 900

Governor

Governer design. : RSV350...1400A0C2006

: -8L

: 0 420 232 580 Governer no.

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : OM 366

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : **←** 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.25 ÷ + 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1380

Rack travel in mm : 10.15 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 62.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
Rated speed rpm : 350	<pre>control lever position degree : 111.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 8.10 Tolerance mm: + 0.10 Del. quantity	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 8.0	
Tolerance cm3/1000 strokes : + 2.0	Rated speed rpm : 1430 rack travel mm : 9.10
Check tolerance cm3/1000s. : +- 4.5 Foreed	Rated speed rpm : 1496 Tolerance 1/min : +- 6
Tolerance + cm3/1000 strokes : 5.5	rack travel mm : 4.00
Check tolerance cm3/1000S. : 9.0	rack travel mm : 1.00 Tolerance mm : + 0.70
‡	Rated speed rpm : 1650
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1431 rack travel mm : 9.10
	Rated speed rpm : 1497
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 6 rack travel mm : 4.00
control lever	rack travel mm : 1.00 Tolerance mm : +- 0.70
position degree : -3 Rated speed rpm : 800	Tolerance mm : +- 0.70 Rated speed rpm : 1650
Rack travel in mm: 0.65 Tolerance mm: + 0.35	Rated speed rpm : 1432 rack travel mm : 9.10
governor spring pre-tension +	Rated speed rpm : 1498
click setting x : 4.50	Tolerance 1/min : + 6
	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 1.00 Tolerance mm : +- 0.70
Rated speed rpm : 1380 Aneroid pressure	Rated speed rpm : 1650
hPa : - + Del. quantity +	Rated speed rpm : 1433
cm3/1000 strokes : 62.0	rack travel mm : 9.10
cm3/1000 strokes : + 1.0 +	Rated speed rpm : 1499
Check tolerance tm3/1000s. : + 3.0	Tolerance 1/min : +- 6 rack travel mm : 4.00
Spreed	rack travel mm : 1.00
Tolerance + cm3/1000 strokes : 3.5	Tolerance mm : \leftarrow 0.70
+	Rated speed rpm : 1650

	† Tolerance mm : +- 0.15
Rated speed rpm : 1434 rack travel mm : 9.10	Rated speed rpm : 630 rack travel mm : 11.05 Tolerance mm : + 0.15
Rated speed rpm : 1500 Tolerance 1/min : + 6 rack travel mm : 4.00	Rated speed rpm : 925 rack travel mm : 10.55 Tolerance mm : + 0.15
rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1650	Start interlock
Rated speed rpm : 1435 rack travel mm : 9.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 1501 Tolerance 1/min : + 6 rack travel mm : 4.00	Aneroid pressure hPa : - Rated speed rpm : 400 Del. quantity
rack travel mm : 1.00 Tolerance mm : +- 0.70 Rated speed rpm : 1650	- cm3/1000 strokes : 50.5 - Tolerance - cm3/1000 strokes : + 2.0
LOW IDLE	Check tolerance cm3/1000s. : +- 4.0
control lever	Aneroid pressure hPa : - Rated speed rpm : 630
position degree : 78.0 tolerance degree : + 4.0	Del. quantity cm3/1000 strokes : 51.0 Tolerance
Testing:	cm3/1000 strokes : + 2.0 Check tolerance
Rated speed rpm : 350 rack travel mm : 8.10 Tolerance mm : + 0.10	cm3/1000s. : +- 4.0 + Aneroid pressure + hPa : -
rack travel mm : 2.00 Rated speed rpm : 510 Tolerance 1/min : +- 30	Rated speed rpm : 925 Del. quantity cm3/1000 strokes : 59.0
Rated speed rpm : 100	Tolerance cm3/1000 strokes : + 2.0 Check tolerance
CRT mm min. : > 19.50	cm3/1000s. : +- 4.0
SET IDLE AUXILIARY SPRING	
Rated speed rpm : 100	STARTING FUEL DELIVERY
TORQUE CONTROL	Rated speed rpm : 100 rack travel mm : 14.80 Tolerance mm : + 0.20
Rated speed rpm : 1380 rack travel mm : 10.15 Tolerance mm : + 0.05	Del. quantity + cm3/1000 strokes : 83.0 + Tolerance + cm3/1000 strokes : +- 7.5
Rated speed rpm : 400 rack travel mm : 11.45	Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm Del. quantity	:	350	
cm3/1000 strokes	:	8.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed Tolerance			
cm3/1000 strokes	:	5.5	
Check tolerance cm3/1000s.	:	9.0	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 876 404

Injection pump

Pump designation : PES6A95D41ORS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV650...1050A8C2263

: L

Governer no. : 0 420 232 583

Cust. part No. : 87 800 648

Customer-spec. information

Customer : FNH-GEOTECH

Motor : 7.5 L Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.60
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance *NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 14.50 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 151.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance + cm3/1000S. : 8.0 +	
	CONTROL LEVER
Rated speed rpm : 650	<pre>control lever position degree : 88.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 5.40 + Tolerance mm: + 0.10 +	
Del. quantity cm3/1000 strokes : 23.5	ASSEMBLY GOVERNOR SETTING
Tolerance +	Rated speed rpm : 1078
cm3/1000 strokes : + 2.0 + Check tolerance	rack travel mm : 12.10
cm3/1000s. : +- 4.5 +	Rated speed rpm : 1118 Tolerance 1/min : +- 5
Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : 5.5 + Check tolerance +	rack travel mm : 0.85
cm3/1000s. : 9.0	Tolerance mm : +- 0.55 Rated speed rpm : 1225
	Nation opening the National Property of the Na
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1079
<u> </u>	rack travel mm : 12.10
CUITAGE OF EDVIC DOCUTION	Rated speed rpm : 1119 Tolerance 1/min : + 5
GUIDE SLEEVE POSITION +	Tolerance 1/min : +- 5 rack travel mm : 4.00
control lever	rack travel mm : 0.85 Tolerance mm : + 0.55
position degree : -3 + Rated speed rpm : 800 +	Tolerance mm : + 0.55 Rated speed rpm : 1225
Rack travel in mm: 0.50 +	
Tolerance mm : + 0.20	Rated speed rpm : 1080 rack travel mm : 12.10
governor spring	
pre-tension + click setting x : 3.00 +	Rated speed rpm : 1120 Tolerance 1/min : +- 5
	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
Rated speed rpm : 750	Tolerance mm : + 0.55 Rated speed rpm : 1225
Aneroid pressure + 1200	
Del. quantity	Rated speed rpm : 1081
cm3/1000 strokes : 151.5 + Tolerance +	rack travel mm : 12.10
cm3/1000 strokes : + 1.0 + Check tolerance	Rated speed rpm : 1121 Tolerance 1/min : + 5
cm3/1000s. : + 3.0	rack travel mm : 4.00
Spreed Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.55 Rated speed rpm : 1225
,	• • • • • • • • • • • • • • • • • • • •

	+ rack travel mm : 12.80
Rated speed rpm : 1082 rack travel mm : 12.10	Tolerance mm : + 0.10
	Rated speed rpm : 1025
Rated speed rpm : 1122	rack travel mm : 13.30
Tolerance 1/min : +- 5 rack travel mm : 4.00	Tolerance mm : + 0.10
Tack Clave time . Tibe	Rated speed rpm : 975
rack travel mm : 0.85	+ rack travel mm : 13.65
Tolerance mm : + 0.55 Rated speed rpm : 1225	Tolerance mm : + 0.15
Rated Speed Phill : 1223	
	+ ANEROID/ALTITUDE
Rated speed rpm : 1083 rack travel mm : 12.10	+ COMPENSATOR TEST
rack travet mm : 12.10	Ī
Rated speed rpm : 1123	+ SETTING
Tolerance 1/min : + 5 rack travel mm : 4.00	+ Rated speed rpm : 500
rack travel mm : 4.00	+ Rated speed rpm : 500 + Pressure hPa : 1200
rack travel mm : 0.85	→ rack travel mm : 14.50
Tolerance mm : +- 0.55	Tolerance mm : + 0.10
Rated speed rpm : 1225	+ Pressure hPa : -
	+ Rated speed rpm : 500
LOW IDLE	+ rack travel mm : 8.90
	† Tolerance mm : + 0.10
control lever	MEASUREMENT
position degree : 71.0	+
tolerance degree : +- 4.0	Rated speed rpm : 500
Setting point w/out bumper spring	Pressure hPa : 325
	+ rack travel mm : 10.70
Rated speed rpm : 650 rack travel mm : 4.90	Tolerance mm : + 0.20
rack travel mm : 4.90 Tolerance mm : +- 0.10	Pressure hPa : 550
	rack travel mm : 13.55
Testing:	Tolerance mm : + 0.05
Rated speed rpm : 650	Start interlock
rack travel mm : 5.40	+
Tolerance mm : ← 0.10	†
rack travel mm : 2.00	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 700	+
Tolerance 1/min : +- 30	+ Aneroid pressure + hPa : -
Rated speed rpm : 100	Rated speed rpm : 500
	+ Del. quantity
CRT mm min. : > 19.50	+ cm3/1000 strokes : 77.0
	+ Tolerance + cm3/1000 strokes : +- 2.0
TORQUE CONTROL	- Check tolerance
750	+ cm3/1000s. : $+$ 4.5
Rated speed rpm : 750 rack travel mm : 14.50	I
Tolerance mm : + 0.10	
	A STARTING FUEL DELIVERY

Rated speed rpm :

STARTING FUEL DELIVERY

1025

F09

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	200.0
Tolerance cm3/1000 strokes	: +-	10.0
Check tolerance cm3/1000s.	: +-	13.0

LOW IDLE

Rated speed rpm Del. quantity	:	650	
cm3/1000 strokes	:	23.5	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed Tolerance			
cm3/1000 strokes	:	5.5	
Check tolerance cm3/1000s.	:	9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 876 405

Injection pump

Pump designation : PES6A95D410RS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV400...1050A2C2263

: -8L

Governer no. : 0 420 232 615

Cust. part No. :

Customer-spec. information

Customer : FNH-GEOTECH Motor : 7.5 L-8640 Trak

Power KW : 131.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.60
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.20 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : \leftarrow 4.5

Rated speed rpm :	450	+ Rated sp		:	1093 11.20
Rack travel in mm :		+	vel mm	·	
	0.10	+ Rated sp		:	1168
Del. quantity cm3/1000 strokes :	15.0	+ rack tra	e 1/min vel mm	: +-	5 4.00
Tolerance cm3/1000 strokes : +-	2 0	+	(a.l. ma		0.85
Check tolerance		+ rack tra		: +-	0.55
cm3/1000s. : +	4.5	+ Rated sp	eed rpm	:	1300
Spreed Tolerance		I			
cm3/1000 strokes :	3.5	+ Rated spe		:	1094
Check tolerance cm3/1000s. :	9.0	† rack trav	vel mm	:	11.20
CIID7 (0003:	,,,	Rated spe	ed rpm	:	1169
		+ Tolerance	e 1/min	: +-	5
(B) SETTING OF INJECTION WITH GOVERNOR	N PUMP	+ rack trav	/elmm	:	4.00
		+ rack trav		:	0.85
_		Tolerance			0.55 1300
GUIDE SLEEVE POSITION		+ Rated spo	ed rpm	:	1300
00101 021111 1001.10		+			
Amost - Lauren		+ Rated spe		•	1095
control lever position degree : - 3		T rack trav	/el mm	:	11.20
(800	+ Rated spe	ed rpm	:	1170
	0.50	+ Tolerance			5
Rack travel in mm : Tolerance mm : +-		t rack trav	/elmm	:	4.00
TOTE GIVE HAII	0.20	rack trav	/el mm	:	0.85
governor spring		Tolerance			0.55
pre-tension	3.50	+ Rated spe	ed rpm	:	1300
click setting x :	3.50	I			
		+ Rated spe			1096
FULL LOAD DELIVERY AT F	ULL LOAD STOP	t rack trav	∕elmm	:	11.20
Rated speed rpm : 1	050	Rated spe	ed rpm	:	1171
Aneroid pressure	222	+ Tolerance			5
hPa : 1 Del. quantity	200	† rack trav	/elmm	:	4.00
cm3/1000 strokes :	110.0	F rack trav	el mm	:	0.85
Tolerance		+ Tolerance		: +-	0.55
cm3/1000 strokes : +- Check tolerance	2.0	Rated spe	ed rpm	:	1300
cm3/1000s. : +-	4.5	I			
		+ Rated spe			1097
		t rack trav	el mm	:	11.20
CONTROL LEVER		Rated spe	ed rom	:	1172
		+ Tolerance	1/min	: +-	5
control lever	101 0	+ rack trav	el mm	:	4.00
position degree : tolerance degree : to	4.0	rack trav	el mm	:	0.85
10 10. miles asg. 00	· • -	+ Tolerance	mm		0.55
ACCEMBIA COMPANION CONTIN	NC	+ Rated spe	ed rpm	:	1300
ASSEMBLY GOVERNOR SETTI	No	†			

Dated speed nom	: 1098	\$	
Rated speed rpm rack travel mm		I	
		+ ANEROID/ALTITUDE	
Rated speed rpm		+ COMPENSATOR TEST	
Tolerance 1/min		†	
rack travel mm	: 4.00	SETTING	
rack travel mm	: 0.85	T SETTING	
Tolerance mm		+ Rated speed rpm	
Rated speed rpm	: 1300	+ Pressure hPa	: 1200
		+ rack travel mm	
LOW IDLE		† Tolerance mm	: +- 0.10
COM INCE		Pressure hPa	: -
		Rated speed rpm	: 500
control lever		+ rack travel mm	: 10.25
position degree		† Tolerance mm	: +- 0.05
tolerance degree	; +- 4.0	T MEASUREMENT	
Setting point w/o	out bumper spring	- IEAGOREI ETT	
		Rated speed rpm	: 500
Rated speed rpm		†	. 500
rack travel mm		+ Pressure hPa + rack travel mm	
Tolerance mm	: 0.10	+ Tolerance mm	: + 0.20
Testing:		1	
		+ Pressure hPa	
Rated speed rpm		+ rack travel mm	
rack travel mm		† Tolerance mm	: + 0.05
Tolerance mm	; +- 0.10	T	
		+ Start interlock	
rack travel mm	: 2.00	+ Start interlock	
Rated speed rpm	: 600	Start interlock	
	: 600		DACTEDICTICS
Rated speed rpm Tolerance 1/min	: 600 : 	Start interlock	RACTERISTICS
Rated speed rpm	: 600 : 	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm Tolerance 1/min	: + 600 : + 30 : 100		: 1200
Rated speed rpm Tolerance 1/min Rated speed rpm	: + 600 : + 30 : 100	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: 1200 : 750
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min.	: + 600 : + 30 : 100	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 750
Rated speed rpm Tolerance 1/min Rated speed rpm	: + 600 : + 30 : 100	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 750
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL	: 600 : + 30 : 100 : > 19.50	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 750 : 137.5
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min.	: 600 : + 30 : 100 : > 19.50 : 1050 : 12.20	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1200 : 750 : 137.5 : + 1.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm	: 600 : + 30 : 100 : > 19.50 : 1050	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 750 : 137.5
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : + 30 : 100 : > 19.50 : 1050 : 12.20 : + 0.10	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1200 : 750 : 137.5 : + 1.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 600 : + 30 : 100 : > 19.50 : 1050 : 12.20 : + 0.10 : 750	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: + 600 : + 30 : 100 : > 19.50 : 1050 : 12.20 : + 0.10 : 750 : 14.10	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: + 600 : + 30 : 100 : > 19.50 : 12.20 : + 0.10 : 750 : 14.10 : + 0.10	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	: + 600 : + 30 : 100 : > 19.50 : 12.20 : + 0.10 : 750 : 14.10 : + 0.10 : 925	FUEL DELIVERY CHARA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: + 600 : + 30 : 100 : > 19.50 : 1050 : 12.20 : + 0.10 : 750 : 14.10 : + 0.10 : 925 : 13.25	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	: + 600 : + 30 : 100 : > 19.50 : 12.20 : + 0.10 : 750 : 14.10 : + 0.10 : 925	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 600 : ← 30 : 100 : > 19.50 : 12.20 : ← 0.10 : 750 : 14.10 : ← 0.10 : 925 : 13.25 : ← 0.15	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 600 : ← 30 : 100 : > 19.50 : 12.20 : ← 0.10 : 750 : 14.10 : ← 0.10 : 925 : 13.25 : ← 0.15 : 1050	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 600 : ← 30 : 100 : > 19.50 : 12.20 : ← 0.10 : 750 : 14.10 : ← 0.10 : 925 : 13.25 : ← 0.15 : 1050	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0 : 500 : 90.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 600 : ← 30 : 100 : > 19.50 : 12.20 : ← 0.10 : 750 : 14.10 : ← 0.10 : 925 : 13.25 : ← 0.15 : 1050	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0 : 500 : 90.0
Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min. TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 600 : ← 30 : 100 : > 19.50 : 12.20 : ← 0.10 : 750 : 14.10 : ← 0.10 : 925 : 13.25 : ← 0.15 : 1050	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 750 : 137.5 : ← 1.0 : ← 3.0 : 3.5 : 6.0 : 500 : 90.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0

LOW IDLE

450 Rated speed rpm Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 400 876 406

Injection pump

Pump designation : PES6A95D410RS2835

EP type number : 0 410 896 896

Governor

Governer design. : RSV400...1050A2C2263

: -9L

Governer no. : 0 420 232 616

Cust. part No. :

Customer-spec. information

Customer : FNH-GEOTECH

Motor : 7.5 L-8740 Trak

Power KW : 142.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.60 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 132.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance + 3.5 + 3.5 + 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	CONTROL LEVER
150	control lever
Rated speed rpm : 450	position degree : 96.0 tolerance degree : + 4.0
Rack travel in mm: 5.10	•
Tolerance mm : +- 0.10 +- Del. quantity +-	RATED SPEED : 12.40
cm3/1000 strokes : 14.0	
Tolerance + 2.0 +	rack travel mm : 4.00
Check tolerance	rack travel mm : 0.85
cm3/1000s. : + 4.5	Tolerance mm : + 0.55
Spreed + Tolerance +	Rated speed rpm : 1300
cm3/1000 strokes : 3.5	
Check tolerance	
cm3/1000s. : 9.0	LOW IDLE
 	
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR	position degree : 70.0
4	tolerance degree : + 4.0
<u> </u>	
011778 01 579 17 0007777011	
GUIDE SLEEVE POSITION	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 450
control lever	Rated speed rpm : 450 rack travel mm : 5.10
control lever position degree : - 3	Rated speed rpm : 450
control lever	Rated speed rpm : 450 rack travel mm : 5.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1050
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0 Tolerance	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 15.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 15.10 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 15.10 Tolerance mm : + 0.10 Rated speed rpm : 900
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 15.10 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 14.30
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 132.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5	Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 620 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. :> 19.50 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 13.45 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 15.10 Tolerance mm : + 0.10 Rated speed rpm : 900

12.95 rack travel mm : + - 0.05Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm Pressure hPa 1200 15.10 rack travel mm : + 0.10Tolerance mm Pressure hPa Rated speed rpm 500 rack travel mm 10.40 Tolerance mm : **←** 0.05 **MEASUREMENT** 500 Rated speed rpm 650 Pressure hPa : 12.15 rack travel mm Tolerance mm : +- 0.20 900 Pressure hPa 14.05 rack travel mm Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1200 650 Rated speed rpm Del. quantity cm3/1000 strokes : 165.0 Tolerance 1.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Aneroid pressure hPa 500 Rated speed rpm Del. quantity 100.0 cm3/1000 strokes : Tolerance 1.0 cm3/1000 strokes : +-

STARTING FUEL DELIVERY

Rated speed rpm Del. quantity

100

cm3/1000 strokes :

195.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : ← 13.0

LOW IDLE

Rated speed rpm 450 Del. quantity

cm3/1000 strokes :

14.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.4.5 : +-Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s.9.0

End of test specification sheet

Check tolerance

cm3/1000s.

3.5

: +-

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 30.04.97

Test oil : ISO 4113

Combination No. : 0 400 876 428

Injection pump

Pump designation : PES6A85D41ORS2761-1

EP type number : 0 410 886 894

Governor

Governer design. : RSV325...1200A0C816L

Governer no. : 0 420 232 614

Cust. part No. : 0 423 1261 KY0150

Customer—spec. information Customer : KHD Motor : BF6L913

Power KW : 109.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. $^{\circ}$ C : Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 11.80

Tolerance mm : + 0.05

Del. quantity cm3/1000 stroke

cm3/1000 strokes : 82.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance cm3/1000 strokes : 3.0	Check tolerance cm3/1000s. : 7.0
Check tolerance cm3/1000s. : 7.0	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 100.0 tolerance degree : +- 4.0
Rack travel in mm: 8.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 16.0	RATED SPEED rack travel mm : 10.80 Rated speed rpm : 1245 Tolerance 1/min : + 5
Tolerance	rack travel mm : 4.00 Rated speed rpm : 1300 Tolerance 1/min : +- 15
Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1460
cm3/1000s. : 7.0 +	rack travel mm : 4.00 Rated speed rpm : 1320
WITH GOVERNOR	
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : -3 Rated speed rpm : 800	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 325 rack travel mm : 7.50
governor spring pre-tension click setting x : 4.00	Tolerance mm : +- 0.10 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10
Rated speed rpm : 1200 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 82.0	rack travel mm : 2.00 Rated speed rpm : 460 Tolerance 1/min : + 30
Tolerance + 0.5 + Check tolerance +	TORQUE CONTROL
<pre>cm3/1000s. : + 2.5 Spreed Tolerance cm3/1000 strokes : 3.0</pre>	Rated speed rpm : 1200 rack travel mm : 11.80 Tolerance mm : +- 0.05

Rated speed rpm : 600 rack travel mm : 11.85 Tolerance mm : + 0.05

Start interlock

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 18.50 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 125.0 Tolerance

cm3/1000 strokes : +- 7.5 Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 : +-Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 30.04.97 : ISO 4113

Combination No. : 0 400 876 439

Injection pump

Pump designation : PES6A90D410RS2757 EP type number : 0 410 896 086

Governor

Governer design. : RSV425...1050A5C2266

: -1L

Governer no.

: 0 420 232 638

Cust. part No. : 112069

Customer-spec. information

: IVECO-FIAT Customer : 8065.25.699 Motor

: 99.0 Power KW

TEST BENCH REQUIREMENTS

: 1.3 Inlet line

Test oil inlet

temp. °C Tolerance °C

: 1 419 992 198 Overflow valve

1.5 Inlet press. bar :

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0 x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

2.30 Prestroke mm : + 0.05 Tolerance mm

Check

tolerance mm : + - 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

: +- 0.75 tolerance 'NW

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.80 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 93.0

Tolerance cm3/1000 strokes : + 0.5

Check tolerance

2.5 cm3/1000s. : +-

1	Talamana
Canad	- Tolerance - cm3/1000 strokes : 3.0
Spreed	- cm3/1000 strokes : 3.0 - Check tolerance
Talanana	- cm3/1000s. : 7.0
Tolerance	- (1113/10003. ; 7.0
Cilist rood strokes : 3.0	
Check tolerance	
cm3/1000s. : 7.0	- CONTROL LEVER
CIID/ 10000:	- CONTROL LEVER
	control lever
1	position degree : 113.0
Rated speed rpm : 425	tolerance degree : + 4.0
+	
Rack travel in mm: 6.70	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.80
Del. quantity +	- Rated speed rpm : 1095
cm3/1000 strokes : 10.0	Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : + 2.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1170
cm3/1000s. : +- 4.0 +	Tolerance 1/min : +- 15
Tolerance	- rack travel mm : 0.85
cm3/1000 strokes : 4.5	- Tolerance mm : + 0.55
Check tolerance	- Rated speed rpm : 1365
cm3/1000s. : 7.0	- Nated opeca (pill 1 100)
	- rack travel mm : 4.00
1	- Rated speed rpm : 1215
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	
MILL GOAFIGION	
WITH GOVERNOR	•
WITH GOVERNOR	-
	- LOW IDLE
GUIDE SLEEVE POSITION	- LOW IDLE
	•
GUIDE SLEEVE POSITION	- - control lever
GUIDE SLEEVE POSITION control lever	- - control lever - position degree : 88.5
GUIDE SLEEVE POSITION control lever position degree : - 3	- - control lever
GUIDE SLEEVE POSITION control lever	control lever position degree : 88.5 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	- - control lever - position degree : 88.5
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing:
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 425
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 425
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : +- 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : + 0.10 rack travel mm : 6.70 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 93.0	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : + 0.10 rack travel mm : 6.70 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 93.0 Tolerance	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 677 Tolerance 1/min : +- 30
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : + 0.5	control lever position degree : 88.5 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : + 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : + 0.10 rack travel mm : 6.70 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : + 0.5 Check tolerance	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 677 Tolerance 1/min : +- 30 TORQUE CONTROL
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : + 0.5 Check tolerance	control lever position degree : 88.5 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.20 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 425 rack travel mm : 6.70 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 677 Tolerance 1/min : +- 30 TORQUE CONTROL

Tolerance mm	: +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.50 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.40 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 12.50 : +- 0.10
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 11.20 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 475 : 11.60 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 600 : 12.20 : + 0.05
Start interlock	

FUEL	DEL TUERY	CHARACTERISTICS
LOEF	DELTACKI	CUMMACIENTOITES

Aneroid pressure

hPa Rated speed rpm 500

Del. quantity 73.0

cm3/1000 strokes :

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s.2.5

STARTING FUEL DELIVERY

100 Rated speed rpm :

rack travel mm : 20.50 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 90.0 Tolerance cm3/1000 strokes : + 7.5Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 425 Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance 4.5 cm3/1000 strokes : Check tolerance cm3/1000s.7.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.03.97 Test oil : ISO 4113

Combination No. : 9 400 030 696

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1250A0C826R

Governer no. : 9 420 034 700

Cust. part No. : 3928662

Customer—spec. information
Customer : CUMMINS
Motor : 487 - 145

Motor : 6BT - 165 HP

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : + 0.10

Check

tolerance *NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.60
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 106.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance	Check tolerance cm3/1000s. : +- 3.0
cm3/1000 strokes : +- 1.0	Spreed Tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000 strokes : 4.0 Check tolerance
Spreed	cm3/1000s. : 6.5
T. 1	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance	control lever
cm3/1000s. : 6.5	position degree : 111.0
	tolerance degree : +- 4.0
1	RATED SPEED
Rated speed rpm : 475	rack travel mm : 11.60
+	Rated speed rpm : 1315
Rack travel in mm: 5.50	Tolerance 1/min : + 5
Tolerance mm : + 0.10 +	
Del. quantity +	rack travel mm : 4.00
cm3/1000 strokes : 20.5	Rated speed rpm : 1415 Tolerance 1/min : +- 5
Tolerance + 2.0	Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 0.85
cm3/1000s. : + 4.5	Tolerance mm : +- 0.55
Spreed	Rated speed rpm : 1500
Tolerance +	·
cm3/1000 strokes : 6.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1420
cm3/1000s. : 8.0	Tolerance 1/min : +- 0.05
†	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
<u> </u>	
GUIDE SLEEVE POSITION +	control lever
Rated speed rpm : 800 +	position degree : 85.0 tolerance degree : 4.0
Rated speed rpm : 800	toterance degree : +- 4.0
Rack travel in mm: 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20 +	
. +	Rated speed rpm : 475
governor spring	rack travel mm : 5.00 Tolerance mm : + 0.10
pre-tension + click setting x : 4.50 +	Tolerance mm : +- 0.10
click setting x : 4.50	Testing:
	, 555 11.5
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 475
,	rack travel mm : 5.50
Rated speed rpm : 1250	Tolerance mm : + 0.10
Aneroid pressure + hPa : 800 +	rack travel mm : 2.00
hPa : 800 + Del. quantity +	Rated speed rpm : 575
cm3/1000 strokes : 106.0	Tolerance 1/min : +- 30

Rated speed rpm : 100 : > 19.50 CRT mm min. TORQUE CONTROL 1250 Rated speed rpm rack travel mm 12.60 Tolerance mm : + 0.05 Rated speed rom : 750 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 800 Pressure hPa 500 Rated speed rpm : 11.00 rack travel mm Tolerance mm : + 0.20**MEASUREMENT** 500 Rated speed rpm : 655 Pressure hPa 12.30 rack travel mm : +- 0.20Tolerance mm 500 Pressure hPa 11.70 rack travel mm Tolerance mm : +- 0.20 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure 800 hPa Rated speed rpm 750 Del. quantity cm3/1000 strokes : 113.8 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000S. : +-4.0 Aneroid pressure hPa

500

Del. quantity cm3/1000 strokes : 88.8 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 121.5
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 15.0

LOW IDLE

Rated speed rpm : 475 Del. quantity 20.5 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance 8.0 cm3/1000s.

End of test specification sheet

Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 28.04.97 Test oil : ISO 4113

Combination No. : F 002 AOZ 034

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100ACC912R

Governer no. : F 002 A20 224

Cust. part No. : DEP: 3283575

Customer—spec. information
Customer : CUMMINS
Motor : 68T - 135 HP

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.10

Check

tolerance °NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.85
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 95.2

Tolerance cm3/1000 strokes : +- 1.0	+ Check tolerance + cm3/1000s. : +- 3.0 + Spreed
Check tolerance cm3/1000s. : + 3.0	Tolerance cm3/1000 strokes : 3.5
Spreed	theck tolerance cm3/1000s. : 6.0
Tolerance	T
cm3/1000 strokes : 3.5	CONTROL LEVER
Check tolerance cm3/100Cs. : 6.0	control lever
	position degree : 105.0 tolerance degree : + 4.0
	†
Rated speed rpm : 475	+ RATED SPEED
5 1 1 1 1 E 10	+ rack travel mm : 10.85
Rack travel in mm : 5.40	Rated speed rpm : 1150
Tolerance mm : + 0.10	+ Tolerance 1/min : + 5
Del. quantity	†
cm3/1000 strokes : 14.0	+ rack travel mm : 4.00
Tolerance	+ Rated speed rpm : 1240
cm3/1000 strokes : + 2.0	+ Tolerance 1/min : + 5
Check tolerance	+
cm3/1000s. : +- 4.5	+ rack travel mm : 0.85
Spreed	+ Tolerance mm : + 0.55
Tolerance	+ Rated speed rpm : 1370
cm3/1000 strokes : 3.5	+
Check tolerance	+ rack travel mm : 4.00
cm3/1000s. : 5.5	+ Rated speed rpm : 1240
	‡
(B) SETTING OF INJECTION PUMP	+
₩ITH GOVERNOR	
	+ LOW IDLE
GUIDE SLEEVE POSITION	+ control lever
	+ position degree : 83.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	+ Setting point w/out bumper spring +
	+ Rated speed rpm : 475
governor spring	+ rack travel mm : 4.90
pre-tension	<pre>† Tolerance mm : ← 0.10</pre>
click setting x : 3.25	+
	† Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 475
TOLL LOAD DELIVER! AT FULL LOAD STOP	rack travel mm : 5.40
Rated speed rpm : 1100	Tolerance mm : + 0.10
Aneroid pressure	Total alice inti
hPa : 1200	T rack travel mm : 2.00
Del. quantity	Rated speed rpm : 550
cm3/1000 strokes : 95.2	Tolerance 1/min : +- 30
Tolerance 93.2	10ter and 17mm . T 30
cm3/1000 strokes : +- 1.0	Rated speed rpm : 100
CHD/ 1000 211 0/62 1.0	hated speed (pill 1 100

Del. quantity CRT mm min. :> 19.00cm3/1000 strokes : 76.3 Tolerance cm3/1000 strokes : +-1.0 TORQUE CONTROL Check tolerance cm3/1000s. 3.0 Rated speed rpm 1100 rack travel mm 11.85 Tolerance mm : **←** 0.05 STARTING FUEL DELIVERY Rated speed rpm 750 rack travel mm 12.60 Rated speed rpm 100 : + - 0.20Tolerance mm rack travel mm 20.25 Tolerance mm : +- 0.75 Del. quantity ANEROID/ALTITUDE cm3/1000 strokes : 120.5 COMPENSATOR TEST Tolerance cm3/1000 strokes : + 10.0Check tolerance SETTING cm3/1000s.: +- 15.0 Rated speed rpm 500 Pressure hPa 1200 Pressure hPa LOW IDLE 500 Rated speed rpm rack travel mm 10.20 Rated speed rpm : 475 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 14.0 **MEASUREMENT** Tolerance cm3/1000 strokes : +-2.0 Rated speed rpm : 500 Check tolerance cm3/1000s. 4.5 Pressure hPa 580 Spreed rack travel mm 12.30 Tolerance Tolerance mm : +- 0.20 cm3/1000 strokes : 3.5 Check tolerance 475 Pressure hPa cm3/1000s. 5.5 11.80 rack travel mm Tolerance mm : +- 0.20 Start interlock End of test specification sheet FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 Rated speed rpm 750 Del. quantity cm3/1000 strokes : 107.2 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 : +--Aneroid pressure hPa 500 Rated speed rpm

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : Test oil :

: 25.04.97 : ISO 4113

Combination No. : F 002 AOZ 051

Injection pump

Pump designation : PES4A95D320/3RS2920

EP type number : F 002 A10 012

Governor

Governer design. : RSV475...1050A0C931R

Governer no. : F 002 A20 237

Cust. part No. : 3283921

Customer—spec. information Customer : CUMMINS

Motor : CUMMINS-4BTA-3.9

Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0
Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : + 0.10

Check

tolerance *NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 115.0

	+ Del. quantity
Tolerance cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : 115.0 + Tolerance
Charle de Langue	+ cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance + cm3/1000s. : +- 3.0 + Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
	+
Rated speed rpm : 475	control lever position degree : 99.0 tolerance degree : + 4.0
Rack travel in mm: 6.25	+
Tolerance mm : + 0.10 Del. quantity	+ RATED SPEED + rack travel mm : 12.30
cm3/1000 strokes : 22.0	+ Rated speed rpm : 1110
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	+
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1195
Spreed	+ Rated speed rpm : 1195 + Tolerance 1/min : + 5
Tolerance	+
cm3/1000 strokes : 6.0	+ rack travel mm : 0.85
check tolerance	+ Tolerance mm : + 0.55
cm3/1000s. : 8.0	+ Rated speed rpm : 1500
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1195
WITH GOVERNOR	+
	‡
GUIDE SLEEVE POSITION	LOW IDLE
control lever	+ control lever
position degree : FREE	position degree : 79.0
Rated speed rpm : 800	tolerance degree : + 4.0
Productional Service 0 50	Control Love difference
Rack travel in mm : 0.50 Tolerance mm : + 0.20	+ Control lever difference + Grad : 20.0
TOTAL MAIN	tolerance degree : + 4.0
governor spring	+
pre-tension	+ Setting point w/out bumper spring
click setting x : 2.50	Rated speed rpm : 475
	rack travel mm : 5.75
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
Rated speed rpm : 1050 Aneroid pressure	Testing:
hPa : 900	Rated speed rpm : 475
	+ rack travel mm : 6.25

Tolerance mm	: +- 0.10	† Tolerance
		cm3/1000 strokes : +- 2.0
rack travel mm	: 2.00 - : 550 -	Check tolerance
Rated speed rpm Tolerance 1/min		├ cm3/1000s. : ← 4.0
TOTAL BRICE TAILER		Aneroid pressure
Rated speed rpm	: 100	hPa : -
	-	Rated speed rpm : 500
CRT mm min.	: > 19.00	Del. quantity
	•	cm3/1000 strokes : 71.8
TORQUE CONTROL		├ Tolerance ├ cm3/1000 strokes : +- 1.0
1011406 601111106	•	Check tolerance
Rated speed rpm	: 1050	cm3/1000s. : + 3.0
rack travel mm		+
Tolerance mm	: + 0.05	†
Rated speed rpm	: 750	STARTING FUEL DELIVERY
rack travel mm	: 14.40	OTARTING FOLL DELIVERY
Tolerance mm	: +- 0.20	Rated speed rpm : 100
	-	rack travel mm : 20.50
		Tolerance mm : + 0.50
ANEROID/ALTITUDE	•	Del. quantity cm3/1000 strokes : 121.4
COMPENSATOR TEST		Tolerance
	·	cm3/1000 strokes : +- 10.0
SETTING	-	Check tolerance
		+ cm3/1000s. : + 15.0
Rated speed rpm	: 500	-
Pressure hPa	: 900	Ī
Pressure hPa	: -	
Rated speed rpm		LOW IDLE
rack travel mm		
Tolerance mm	: + 0.20	Rated speed rpm : 475
MEASUREMENT		Del. quantity cm3/1000 strokes : 22.0
MENOONLINEIVE	-	Tolerance
Rated speed rpm	: 500	cm3/1000 strokes : +- 2.0
	-	Check tolerance
Pressure hPa	: 600 -	- cm3/1000s. : +- 4.5
rack travel mm Tolerance mm	: 13.30 - : + 0.20 -	Spreed Tolerance
TOTEL GITCE THE	0.20	cm3/1000 strokes : 6.0
Pressure hPa	: 400	Check tolerance
rack travel mm	: 12.00 -	cm3/1000s. : 8.0
Tolerance mm	: ← 0.20	+
Start interlock		
Office Hitch COCK	-	
	-	1
PIER ARITHMAN	ADACTEDICTI CO	End of test specification sheet
FUEL DELIVERY CHA	HACIERISIICS -	
	_	
Aneroid pressure	-	-
Aneroid pressure hPa	: 900	
hPa Rated speed rpm		
hPa Rated speed rpm Del. quantity	: 750 -	
hPa Rated speed rpm	: 750 -	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 066 707

Injection pump

Pump designation : PES6P120A120RS3358

EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P2A618

Governer no. : 0 421 833 513

Cust. part No. : 3927356

Customer-spec. information

Customer : CDC

: 6BTA ELITE Motor

Power KW 136.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1 Inlet press. bar :

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.03

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : +- 0.30 Phasing

Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery blocking

*NW after s.o.d. : 6.75 : **←** 0.50 Tolerance

Check

tolerance 'NW $: \leftarrow 0.75$

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.35

Tolerance mm : +- 0.05

Del. quantity +	Aneroid pressure
cm3/1000 strokes : 146.5	hPa : 1200 Del. quantity
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 146.5 Tolerance
Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : + 3.0	cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. 7.5
Check tolerance	
cm3/1000s. : 7.5	CONTROL LEVER
‡	control lever
Rated speed rpm : 475	position degree : 103.0 tolerance degree : +- 4.0
Rack travel in mm: 5.40 Tolerance mm: + 0.10	RATED SPEED
Del. quantity cm3/1000 strokes : 24.5	rack travel mm : 10.30 Rated speed rpm : 1175
Tolerance cm3/1000 strokes : + 2.0	Tolerance 1/min : + 5
Check tolerance cm3/1000s. : + 4.5	rack travel mm : 6.50 Rated speed rpm : 1230
Spræd Tolerance	Tolerance 1/min : - 5
cm3/1000 strokes : 6.0 Check tolerance	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1375
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever
‡	position degree : 81.0 tolerance degree : + 4.0
control lever position degree : - 3	Control lever difference
Rated speed rpm : 800	Grad : 19.0 tolerance degree : +- 6.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 475
pre-tension + click setting x : 3.75 +	rack travel mm : 4.90 Tolerance mm : +- 0.05
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1100	Rated speed rpm : 475 rack travel mm : 5.40 Tolerance mm : + 0.10
ı	The second reservation of the second

rack travel mm : 2.00
Rated speed rpm : 590
Tolerance 1/min : +- 30

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.35 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1200

Pressure hPa : Rated speed rpm : 500
rack travel mm : 9.10
Tolerance mm: : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 800 rack travel mm : 10.90 Tolerance mm : + 0.20

Pressure hPa : 545
rack travel mm : 9.75
Tolerance mm : + 0.20

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 96.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

3/1000s. : \leftarrow 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : + 25.0

LOW IDLE

Rated speed rpm : 475
Del. quantity

cm3/1000 strokes : 24.5

Tolerance

cm3/1000 strokes : + 2.0
Check tolerance

cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 23.04.97 : ISO 4113

Test oil

Combination No. : 0 402 066 709

Injection pump

Pump designation : PES6P120A120RS3358

EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P0A632

Governer no. : 0 421 833 539

Cust. part No. : 3929672

Customer-spec. information Customer : CDC

Motor

: 68TA ELITE

Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240 Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 6.75

Tolerance : + 0.50

Check tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.20

Tolerance mm : + 0.05

	Aneroid pressure
Del. quantity + cm3/1000 strokes : 138.5 +	hPa : 1500
cm3/1000 strokes : 138.5	Del. quantity cm3/1000 strokes : 138.5
Tolerance	Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : + 1.0
511D7 1000 321 01(C3	Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0 $+$	Spreed
	Tolerance
Spreed +	cm3/1000 strokes : 4.0
Tulunana	Check tolerance
Tolerance + cm3/1000 strokes : 4.0 +	cm3/1000s. : 7.5
cm3/1000 strokes : 4.0	
Check tolerance	
cm3/1000s. : 7.5	CONTROL LEVER
1	
	control lever
+	position degree : 93.0
Rated speed rpm : 475	tolerance degree : +- 4.0
+	
Rack travel in mm: 5.40	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 10.20
Del. quantity + cm3/1000 strokes : 24.5 +	Rated speed rpm : 1145
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	rack travel mm : 5.70
Check tolerance	Rated speed rpm : 1230
cm3/10COs. : + 4.5	Toterance 1/min : + 5
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 6.0	Tolerance mm : +- 0.55
Check tolerance +	Rated speed rpm : 1400
cm3/1000s. : 9.0 +	
+	
(D) SETTING OF THIS CTION DIME	
(B) SETTING OF INJECTION PUMP +	LOW IDLE
WITH GOVERNOR I	LOW IDEE
1	
	control lever
GUIDE SLEEVE POSITION +	position degree : 78.0
+	tolerance degree : +- 4.0
†	
control lever	Control lever difference
position degree : -3	Grad : 15.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm: 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20	secting point wrout bumper spring
Total differ limit U.20	Rated speed rpm : 475
governor spring	rack travel mm : 4.90
pre-tension +	Tolerance mm : + 0.10
click setting x : 4.25	
+	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 475
D. A. d. and and and a 4400	rack travel mm : 5.40
Rated speed rpm : 1100 +	Tolerance mm : + 0.20

rack travel mm	: 2.00
Rated speed rpm	: 630
Tolerance 1/min	; + 30
Rated speed rpm	: 100
CRT mm min.	: < 19.00
TORQUE CONTROL	
Rated speed rpm	: 1100
rack travel mm	: 11.20
Tolerance mm	: + 0.05
Rated speed rpm	: 750
rack travel mm	: 12.00
Toterance mm	: + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
Dagger ba	
Pressure hPa Rated speed rpm	500
rack travel mm	
Tolerance mm	: + 0.20
MEASUREMENT	
	500
Rated speed rpm	: 500
Pressure hPa	: 975
rack travel mm	: 11.50
Tolerance mm	: + 0.20
Pressure hPa	: 545
rack travel mm	: 9.85
Tolerance mm	: +- 0.20
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 750
Del. quantity	. 170.0
cm3/1000 strokes Tolerance	: 170.0
co3/1000 etectos	30

Check tolerance cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0
Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		96.5
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm	:		100 21.00
Tolerance mm	•	+-	0.50
Del. quantity			
cm3/1000 strokes	:		165.0
Tolerance			
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000s.	:	+-	25.0

LOW IDLE

Rated speed rpm	:	475
Del. quantity		
cm3/1000 strokes	:	24.5
Tolerance		
cm3/1000 strokes	:	- 2.0
Check tolerance		
cm3/1000s.	:	← 4.5
Spreed		
Tolerance		
cm3/1000 strokes	:	6.0
Check tolerance		
cm3/1000s.	:	9.0

End of test specification sheet

cm3/1000 strokes : \leftarrow 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.04.97 : ISO 4113

Combination No. : 0 402 066 713

Injection pump

Pump designation : PES6P110A120RS3357

EP type number : 0 412 016 754

Governor

Governer design. : RSV550...1100P2A677

Governer no. : 0 421 833 596

Cust. part No. : 3931957

Customer-spec. information

Customer

: CDC

Motor

: 6CTA ELITE

Power KW

: 208.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm 3.60

: +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery blocking

*NW after s.o.d. : 8.50

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm

: 1100

Rack travel in mm: 13.00

Tolerance mm : \leftarrow 0.05

Del. quantity - cm3/1000 strokes : 195.5	+ Aneroid pressure + hPa : 1800
Tolerance - 1.0	Del. quantity cm3/1000 strokes : 195.5
cm3/1000 strokes : + 1.0 - Check tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance
cm3/1000s, ; + 3.0	cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000S. : 7.5
Check tolerance cm3/1000s. : 7.5	CONTROL LEVER
	control lever
Rated speed rpm : 550	position degree : 97.0 tolerance degree : + 4.0
Rack travel in mm: 6.40 - Tolerance mm: + 0.20 -	RATED SPEED
Del. quantity	t rack travel mm : 12.00
cm3/1000 strokes : 29.5	Rated speed rpm : 1170
cm3/1000 strokes : +- 2.0	Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 6.40
cm3/1000S. : +- 4.5 - Spreed - Tolerance -	- Rated speed rpm : 1230 Tolerance 1/min : +- 5
cm3/1000 strokes : 6.0	T rack travel mm : 0.85
Check tolerance cm3/1000S. : 9.0	Tolerance mm : + 0.55
Cm3/10003. : 9.0	+ Rated speed rpm : 1375 -
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 6.40 Rated speed rpm : 1235
-	
GUIDE SLEEVE POSITION -	LOW IDLE
control lever	t control lever
position degree : - 3	position degree : 77.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : +- 0.20	Grad : 22.0 tolerance degree : +- 6.0
governor spring	+
pre-tension - click setting x : 3.50 -	Setting point w/out bumper spring
The street of th	Rated speed rpm : 550
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.90 Tolerance mm : + 0.10
Rated speed rpm : 1100	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 550 : 6.40	+ Del. quantity + cm3/1000 strokes : 212.0
Tolerance mm	: ← 0.20	+ Tolerance + cm3/1000 strokes : +- 2.0
Rated speed rpm	: 100	+ Check tolerance
CRT mm min.	. / 10 00	+ cm3/1000s. : +- 5.0
CK! MA WITS.	; \ 19.00	Aneroid pressure
		+ hPa : -
TORQUE CONTROL		Rated speed rpm : 600
Rated speed rpm	: 1100	+ Del. quantity + cm3/1000 strokes : 154.5
rack travel mm		+ Tolerance
Tolerance mm	: + 0.05	+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 750	+ cm3/1000s. : +- 3.0
rack travel mm	: 13.50	†
Tolerance mm	: +- 0.20	†
Rated speed rpm	; 950	STARTING FUEL DELIVERY
rack travel mm	: 13.50	}
Tolerance mm	: ← 0.20	+ Rated speed rpm : 100
		+ rack travel mm : 21.00
·		+ Tolerance mm : → 0.50
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 165.0
		+ Tolerance
		+ cm3/1000 strokes : + 20.0
SETTING		+ Check tolerance
Rated speed rpm	: 600	+ cm3/1000s. : 1 ≥ 25.0
Pressure hPa	: 1800	+
Pressure hPa	• -	İ
Pressure hPa Rated speed rpm	. 660	LOW IDLE
rack travel mm	: 11.50	1000
Tolerance mm	: +- 0.20	Rated speed rpm : 550
		+ Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 29.5
		† Tolerance
Pated speed rpm	: 600	+ cm3/1000 strokes : +- 2.0
	A	+ Check tolerance
Pressure hPa	: 1265	+ cm3/1000s. : +- 4.5
rack travel mm	: 13.10	Spreed
Tolerance mm	: +- 0.20	+ Tolerance
Dansauma En-	. 075	+ cm3/1000 strokes : 6.0
Pressure hPa	: 875	+ Check tolerance
rack travel mm Tolerance mm	: 12.15 : + 0.20	† cm3/1000s. : 9.0
COLETACION MIN	. + . 0.20	Ţ
Start interlock		†
Start interlock		<u> </u>

G13

Aneroid pressure hPa Rated speed rpm

1800 950

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.02.96 : ISO 4113

Combination No. : 0 402 196 707

Injection pump

Pump designation : PES6P120A720RS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 62645

Customer-spec. information Customer : DEERE

Motor

: 6081HF007

Power KW

: 203.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 2 417 413 077

Inlet press. bar :

2.0

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter : 3.0 x length mm :

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Firing order : 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

Start of delivery mark

*NW after s.o.d. : 9.00 : +- 0.50 Tolerance

Check

tolerance *NW

: +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel

15.00

Tolerance mm

: +- 0.50

2.50

Difference ° CS :

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

Engine speed min-1: 0	+ Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	+ tolerance V : +/- 1.20
	†
Uact V : 3.100	+ Engine speed min-1: 600
CRT mm : 13.00	+ Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	+ Amplitude V : max.1.4
tolerance mm : +/- 0.10	†
	†
Check value	
(P, R and H pump)	+ (C) INJECTION PUMP WITH POSITIONER
	†
	+ TEST POINT V1
Uact V : 1.700	†
CRT mm : 6.15	+ Rated speed rpm : 1100
Tolerance mm : +/- 0.25	+ Uact V : 2.880
Check	+ Del. quantity
tolerance mm : +/- 0.30	+ cm3/1000 strokes : 140.0
	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
Setting point	+ Check tolerance
(M pump)	+ cm3/1000s. : +- 3.0
	+ Spreed
Uact V : 3.100	+ Tolerance
CRT mm : 12.50	+ cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05	+ Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+
	+ FUEL DELIVERY CHARACTERISTICS
Check value	+
(M pump)	Rated speed rpm : 700
	- Uact V : 2.880
Uact V : 1.700	Del. quantity
CRT mm : 5.50	+ cm3/1000 strokes : 141.5
Tolerance mm : +/- 0.25	+ Tolerance
Check	+ cm3/1000 strokes : + 3.0
tolerance mm : +/- 0.30	+ Check tolerance
	+ cm3/1000s. : +- 6.0
Stop position	+ Spreed
	+ Tolerance
Uact V : Value with	- cm3/1000 strokes : 8.0
deenergised adjusting magnet	+ Check tolerance
and control rod in	+ cm3/1000s. : 12.0
stop position.	†
CRT mm : 0.75	+ Rated speed rpm : 425
Tolerance mm : +/- 0.25	+ Uact V : 1.610
Check	+ Del. quantity
tolerance mm : +/- 0.35	cm3/1000 strokes : 22.0
	Tolerance
Chiefale open officen	cm3/1000 strokes : +- 3.0
ENGINE-SPEED SENSOR	Check tolerance
(Ali P and R pumps not	+ cm3/1000s. : +- 6.0
H and M pumps)	Spreed
	Tolerance
Test with control rod	+ cm3/1000 strokes : 6.0
in stop position	+ Check tolerance
	+ cm3/1000s. : 10.0
Engine speed min-1: 60	+

TEST POINT L1

425 Rated speed rpm 1.610 Uact V Tolerance Volt : + 0.060

Check tolerance

Volt : +- 0.060

STARTING FUEL DELIVERY

Rated speed rpm 100 Uact V 4.600

Del. quantity cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : **←** 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 30,04,97 : ISO 4113

Combination No. : 0 402 736 910

Injection pump

Pump designation : PES6P120A120RS7432

EP type number : 0 412 726 967

Governor

Governer design. : RQV450...1100PA1317K

Governer no. : 0 421 815 545

Cust. part No. : 3931948

Customer-spec. information Customer : CDC : GCTA-A Motor

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 4
Tolerance °C : +-

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240Tolerance : +-0.30

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance

: +- 0.50

Check

tolerance "NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.95

Tolerance mm : +- 0.05

G17

Del. quantity cm3/1000 strokes : 236.5	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	+ Rated speed rpm : 1100
Check tolerance cm3/1000S. : ← 4.0	+ Aneroid pressure + hPa : 1600
Spreed	+ Del. quantity + cm3/1000 strokes : 236.5
	+ Tolerance
Tolerance cm3/1000 strokes : 5.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
	+ cm3/1000s. : +- 4.0
Check tolerance	+ Spreed
cm3/1000s. : 9.0	+ Tolerance
	+ cm3/1000 strokes : 5.0 - Check tolerance
	+ cm3/1000s. : 9.0
Rated speed rpm : 450	T (115/1000). 7.0
Matea opeca (pii) 1	1
Rack travel in mm : 6.75	
Tolerance mm : +- 0.20	CONTROL LEVER
Del. quantity	+
cm3/1000 strokes : 32.0	t control lever
Tolerance cm3/1000 strokes : +- 3.0	position degree : 113.0
cm3/1000 strokes : +- 3.0 Check tolerance	tolerance degree : + 4.0
cm3/1000s. : +- 5.0	RATED SPEED
Spreed	rack travel mm : 13.90
Tolerance	Rated speed rpm : 1170
cm3/1000 strokes : 8.0	Tolerance 1/min : + 15
Check tolerance	+
cm3/1000s. : 12.0	† rack travel mm : 3.00
	+ Rated speed rpm : 1250
(D) CETTING OF THIS COTTON DUMP	Tolerance 1/min : + 5
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.50
WITH GOVERNOR	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
	Rated speed rpm : 1350
GUIDE SLEEVE TRAVEL	+
- A449	+
Rated speed rpm : 1163	†
guide sleeve travel mm : 7.50	LOW IDLE
Tolerance mm : +- 0.15	I COM IDLE
Total alice min	I
Rated speed rpm : 450	+ control lever
guide steeve	position degree : 74.0
travel mm : 1.33	tolerance degree : +- 4.0
Tolerance mm : + 0.20	+
Dated aread upp a 940	Control lever difference
Rated speed rpm : 860	+ Grad : 39.0
guide sleeve travel mm : 4.55	tolerance degree : + 6.0
Tolerance mm : + 0.25	Testing:
1000 mm 1 0 CO	- County
Rated speed rpm : 1560	Rated speed rpm : 450
guide steeve	rack travel mm : 6.75
travel mm : 13.50	Tolerance mm : + 0.20

Rated speed rpm	: 375	Ţ
CRT mm min.		FUEL DELIVERY CHARACTERISTICS
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , ,	Aneroid pressure
ated speed rpm	: 525	hPa : 1600
- #	•	Rated speed rpm : 750
		l Dol quantity
DRQUE CONTROL		cm3/1000 strokes : 224.5
		+ Tolerance
ated speed rpm	: 1100	+ cm3/1000 strokes : + 3.0
ack travel mm	: 14.95	+ Check tolerance
olerance mm	: +- 0.05	+ cm3/1000s. : + 6.0
		Spreed
ated speed rpm	: 750	+ Tolerance
ack travel mm	: 13.95	cm3/1000 strokes : 8.0
olerance mm	: +- 0.10	+ Check tolerance
		+ cm3/1000s. : 12.0
ated speed rpm	: 500	+
ack travel mm	: 13.60	+ Aneroid pressure
ack travel mm olerance mm	: +- 0.20	-
		+ Rated speed rpm : 1000
		+ Cel. quantity
NEROID/ALTITUDE		+ cm3/1000 strokes : 183.5
OMPENSATOR TEST		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
TTING		+ cm3/1000s. : + 3.0
		+
ted speed rpm	: 1100	+
essure hPa	: 1600	+
		+ STARTING FUEL DELIVERY
ressure hPa	-	+
ited speed rpm	: 1000	Rated speed rpm : 100
ck travel mm	: 13.25	+ rack travel mm : 21.00
lerance mm	: + 0.20	+ Tolerance mm : $+$ 0.50
		+ Del. quantity
EASUREMENT		+ cm3/1000 strokes : 156.0
	445-	† Tolerance
ated speed rpm	: 1100	+ cm3/1000 strokes : + 20.0
•	444-	+ Check tolerance
ressure hPa	: 1190	+ cm3/1000s. : $+$ 25.0
ick travel mm	: 14.15	†
lerance mm	: ← 0.20	†
Le	. 4050	†
ressure hPa	: 1050	1011 701 5
ck travel mm	: 13.60	+ LOW IDLE
lerance mm	: +- 0.20	† 2004
		Rated speed rpm : 450
art interlock		+ Del. quantity
A		+ cm3/1000 strokes : 32.0
ted speed rpm	: > 100	Tolerance
ted speed rpm	: < 390	+ cm3/1000 strokes : + 3.0
1		+ Check tolerance
neck		+ cm3/1000s. + 5.0
eed 1/min	: > 80	Spreed
neck		+ Tolerance
eed 1/min	: < 400	+ cm3/1000 strokes : 8.0
		I CHARD TALARAMA
		+ Check tolerance + cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.04.97 Edition Test oil : ISO 4113

Combination No. : 0 402 736 914

Injection pump

Pump designation : PES6P120A120RS7370

EP type number : 0 412 726 934

Governor

Governer design. : RQV400...1250PA1315K

Governer no. : 0 421 815 542

Cust. part No. : 3932179

Customer-spec. information Customer : CDC : SBTA-A Motor Power KW : 134.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +-2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.50
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance $: \leftarrow 0.50$

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.75

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 166.5	Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	+ Rated speed rpm : 1250
Check tolerance	+ Aneroid pressure
cm3/1000s. : +- 4.0	+ hPa : 1200
Connection	Del. quantity
Spreed	+ cm3/1000 strokes : 166.5 + Tolerance
Tolerance	- cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 8.0	Check tolerance
timbridge strokes . 0.0	- cm3/1000s, :+- 4.0
Check tolerance	Spreed
cm3/1000s. : 12.0	Tolerance
	+ cm3/1000 strokes : 8.0
	+ Check tolerance
	+ cm3/1000s. : 12.0
Rated speed rpm : 375	
Rack travel in mm : 6.20	†
Tolerance min : +- C.20	CONTROL LEVER
Del. quantity	T CONTROL ELVEN
cm3/1000 strokes : 19.5	∔ control lever
Tolerance	position degree : 118.0
cm3/1000 strokes : + 3.0	+ tolerance degree : +- 6.0
Check tolerance	+
cm3/1000s. : +- 5.0	+ RATED SPEED
Spreed	+ rack travel mm : 12.70
Tolerance	+ Rated speed rpm : 1325
cm3/1000 strokes : 4.0	Tolerance 1/min : +- 25
Check tolerance cm3/1000s. : 8.0	rack travel mm : 6.60
CH5/10005 0.0	Rated speed rpm : 1500
	+ Tolerance 1/min : + 5
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	rack travel mm : 0.50
	├ Tolerance man : ← 0.50
	+ Rated speed rpm : 1700
GUIDE SLEEVE TRAVEL	†
Rated speed rpm : 1412	I
guide Sleeve	
travel mm : 9.88	∔ LOW IDLE
Tolerance mm : +- 0.15	+
	†
Rated speed rpm : 420	the control lever
guide sleeve	position degree : 65.0
travel mm : 1.56 Tolerance mm : +- 0.20	tolerance degree : +- 6.0
TOTE AFTER MIN : TO U.ZU	Control lever difference
Rated speed rpm : 1020	Grad : 53.0
guide sleeve	tolerance degree : + 6.0
travel mm : 5.97	+
Tolerance mm : + 0.25	- Testing:
Rated speed rpm : 2000	Rated speed rpm : 375
guide sleeve	rack travel mm : 6.20
travel mm : 13.50	+ Tolerance mm : +- 0.20

		†	
Rated speed rpm		FUEL DELIVERY CH	ARACTERISTICS
CRT mm min.	: > 7.00	+ Aneroid pressure	
Rated speed rpm	: 425	+ hPa + Rated speed rpm	: 1200
TORQUE CONTROL		Del. quantity cm3/1000 strokes Tolerance	: 123.5
Rated speed rpm rack travel mm	: 13.75	cm3/1000 strokes Check tolerance	
Tolerance mm	: ← 0.05	cm3/1000s. Spreed	: +- 6.0
Rated speed rpm rack travel mm Tolerance mm		Tolerance cm3/1000 strokes Check tolerance	
		- cm3/1000s.	: 12.0
Rated speed rpm rack travel mm Tolerance mm	: + 0.20	+ Aneroid pressure + hPa - Rated speed rpm	: -
ANEROID/ALTITUDE COMPENSATOR TEST	بو ولينيه فالمتافقاتين ولينيون برومايات	Del. quantity cm3/1000 strokes Tolerance	96.0
SETTING		cm3/1000 strokes Check tolerance cm3/1000s.	
251 (11/4)		T CIR37 10003.	. +- 4.0
Rated speed rpm Pressure hPa	: 1250 : 1200	CTARTING SUSI DE	TUEDV
Pressure hPa	: -	+ STARTING FUEL DE	LIVERY
Rated speed rpm	: 1250	Rated speed rpm	: 100
rack travel mm Tolerance mm	: + 0.20	rack travel mm Tolerance mm Del. quantity	
MEASUREMENT		cm3/1000 strokes	: 157.0
Rated speed rpm	: 1250	cn3/1000 strokes Check tolerance	
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.55 : + 0.30	- cm3/1000s.	: ← 25.0
Pressure hPa rack travel mm Tolerance mm	: 265 : 10.80 : ← 0.20	LOW IDLE	
Start interlock		Rated speed rpm Del. quantity	
Rated speed rpm Rated speed rpm		+ cm3/1000 strokes + Tolerance + cm3/1000 strokes	
Check		Check tolerance cm3/1000s.	: +- 5.0
speed 1/min Check	: > 80	Spreed Tolerance	
speed 1/min	: < 310	cm3/1000 strokes Check tolerance	
		+ cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.04.97 Test oil : ISO 4113

Combination No. : F 002 A0Z 041

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A0c923R

Governer no. : F 002 A20 231

Cust. part No. : 3932476

Customer-spec. information

Customer : CDC

Motor

: 6BT

Power KW

: 75.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prastroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240 : + 0.50

Tolerance

Check

tolerance *NW

: **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 9.00

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 70.5	Aneroid pressure hPa : - Del. quantity
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 70.5 Tolerance
Check tolerance cm3/1000s. : + 3.0	<pre>cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0</pre>
Spreed	Spreed Tolerance
Tolerance + cm3/1000 strokes : 3.5	<pre>cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 6.0</pre>
Check tolerance cm3/1000S. : 6.0	
	CONTROL LEVER
Rated speed rpm : 500	control lever position degree : 98.0
Rack travel in mm: 5.00 Tolerance mm: + 0.10	RATED SPEED rack travel mm : 8.00
Del. quantity cm3/1000 strokes : 18.5 Tolerance	Rated speed rpm : 1145 Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0 + Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1240
cm3/1000s. : + 4.5 Spreed Tolerance	Tolerance 1/min : + 5 rack travel mm : 0.85
cm3/1000 strokes : 3.5 Check tolerance	Tolerance mm : + 0.55 Rated speed rpm : 1400
cm3/1000s. : 5.5	rack travel mm : 4.00 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Nated Speed I pill . 1250
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 84.0 Control lever difference
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Grad : 14.0 tolerance degree : +- 6.0
governor spring	Setting point w/out bumper spring
pre-tension click setting x : 2.75	Rated speed rpm : 500 rack travel mm : 4.50 Tolerance mm :+- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1100	Rated speed rpm : 500 rack travel mm : 5.00

Tolerance mm : + - 0.10

Rated speed rpm 100

CRT mon min. : > 19.00

TORQUE CONTROL

Rated speed rpm 1100 : 9.00 rack travel mm : Tolerance mm : + 0.05

Rated speed rpm : 750 rack travel mm 9.60 Tolerance mm : + 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 750 Rated speed rpm

Del. quantity

cm3/1000 strokes : 76.5

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. : +-4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 : Tolerance mm : + 0.50

Del. quantity cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 18.5

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. : +-4.5 Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s.

5.5

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.04.97 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 042

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A0C924R

Governer no. : F 002 A20 232

Cust. part No. : 3932477

Customer-spec. information Customer : CDC : 6BT Motor

Power KW : 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +--2.0

: 2 417 413 093 Overflow valve

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

2.85 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.50

Tolerance Check

: +- 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 9.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 78.5

1	No.1 minutishin
Tolerance	Del. quantity cm3/1000 strokes : 78.5
cm3/1000 strokes : +- 1.0	Tolerance
1	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 3.0 +	$cm3/1000s.$: \leftarrow 3.0
	Spreed
Spreed +	Tolerance
- -1	cm3/1000 strokes : 3.5
Tolerance + cm3/1000 strokes : 3.5	Check tolerance cm3/1000S. : 6.0
cms/1000 strokes : 5.5	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : 6.0	
	CONTROL LEVER
+	
<u> </u>	control lever
Rated speed rpm : 500	position degree : 95.0
Rack travel in mm: 5.10 +	tolerance degree : +- 4.0
Tolerance mm : + 0.10 +	RATED SPEED
Del. quantity	rack travel mm : 8.80
cm3/1000 strokes : 18.5	Rated speed rpm : 1165
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	
Check tolerance	rack travel mm : 5.40
cm3/1000s. : + 4.5	Rated speed rpm : 1235
Spreed	Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 3.5 +	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : 5.5	Rated speed rpm : 1400
-	nates speed (pill 1 7 Too
+	rack travel mm : 5.40
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1240
WITH GOVERNOR	
†	
GUIDE SLEEVE POSITION	LOW IDLE
`	
control lever	control lever
position degree : - 3	position degree : 80.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 15.0
10001001001001	tolerance degree : + 6.0
governor spring	
pre-tension +	Setting point w/out bumper spring
click setting x : 2.25	
+	Rated speed rpm : 500
FILL LOAD DELTHEDY AT FILL LOAD CTOD	rack travel mm : 4.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
Rated speed rpm : 1100	Testing:
Aneroid pressure	resemb.
hPa : -	Rated speed rpm : 500
	rack travel mm : 5.10

: **←** 0.10 Tolerance mm

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm 1100 : rack travel mm 9.85 :

Tolerance mm : +- 0.05

Rated speed rpm : 800 10.90 rack travel mm Tolerance mm : +- 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm 800

Del. quantity

cm3/1000 strokes : 90.5

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

: +cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 :

Tolerance mm : **⊹**− 0.50

Del. quantity

cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 18.5

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

: +-4.5 cm3/1000s.

Spreed Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s.: 5.5

End of test specification sheet

HO2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.04.97 Edition Test oil : ISO 4113

Combination No. : 0 402 046 862

Injection pump

Pump designation : PES6P120A320RS3337 EP type number : 0 412 026 770

Governor

Governer design. : RQV300...1250PA1149K

: 0 421 815 416 Governer no.

Cust. part No. : CCEP 5141A 66-218

Customer-spec. information

Customer : RENAULT V.I. Motor : MIDR 06-02-26 V4

Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : **←** 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.10 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 : + 0.30 Phasing

Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : -0.18

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

10.50 travel Difference * CS : 2.00

CRT ZERO POSITION

Rack travel in mm: 11.20 Tolerance mm: + 0.05	Rated speed rpm : 905 guide sleeve travel mm : 6.54 Tolerance mm : +- 0.25
BASIC SETTING	
Rated speed rpm : 1250	Rated speed rpm : 381 guide sleeve travel mm : 2.38
Del. quantity cm3/1000 strokes : 153.0	Tolerance mm : +- 0.25 Rated speed rpm : 431
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 2.98 Tolerance mm : + 0.25
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 530
Spreed	guide sleeve travel mm : 3.77 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1580 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 13.50 Tolerance mm : + 0.50
+	CUIDE SLEEVE DOCUTION
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm: -6.30 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 34.0 Tolerance cm3/1000 strokes: + 2.0 Check tolerance	control lever position degree : - 1 Rated speed rpm : 1380 Rack travel in mm : 10.50 Tolerance mm : +- 1.30
cm3/1000s. : +- 5.0 +- Spreed +- Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	Rated speed rpm: : 1250 Aneroid pressure
cm3/1000s. : 12.0	hPa : 1000 Del. quantity cm3/1000 strokes : 153.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 1346 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance
travel mm : 10.55 Tolerance mm : + 0.15	cm3/1000s. : 9.0
Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20	CONTROL LEVER

control lever position degree	· 297 በ	‡	Rated speed rpm Pressure hPa	: 1250 : 1000
tolerance degree		}	Pressure hPa Rated speed rpm	: 1250
RATED SPEED rack travel mm Rated speed rpm	: -1.00 : 1340	‡	rack travel mm Tolerance mm	: -1.90 : + 0.20
Tolerance 1/min		1	MEASUREMENT	
rack travel mm Rated speed rpm	: -7.20 : 1420	‡	Rated speed rpm	: 1250
Tolerance 1/min		‡	Pressure hPa rack travel mm	
rack travel mm Tolerance mm	: −10.70 : ← 0.50	‡	Tolerance mm	: + 0.10
Rated speed rpm	: 1550	‡	Pressure hPa rack travel mm	: 280 : -0.25
		‡	Tolerance mm	: + 0.05
LOW IDLE		-	Start interlock	
		‡	Rated speed rpm Rated speed rpm	
control lever position degree	: 244.0	‡	Check	
tolerance degree	: +- 4.0	‡	speed 1/min Check	: > 155
Testing:		1	speed 1/min	: < 260
Rated speed rpm rack travel mm		+	CUEL DEL TUEDY CHA	BACTEDICTICS
Tolerance mm		Ŧ	FUEL DELIVERY CHA	RACIERISTICS
Rated speed rpm	: 200	Ţ	Aneroid pressure hPa	: 1000
CRT mm min.	: < -5.20	‡	Rated speed rpm Del. quantity	: 850
Rated speed rpm	: 400	<u>†</u>	cm3/1000 strokes Tolerance	: 125.0
nated speed (pil)	. 400	Ŧ	cm3/1000 strokes	: +- 3.0
TORQUE CONTROL			Check tolerance cm3/1000s.	: +- 6.0
Rated speed rpm	: 1250	Ī	Aneroid pressure	
Rated speed rpm	: 850	+	Rated speed rpm	1250
rack travel mm Tolerance mm	: -1.35 : +- 0.15	‡	Del. quantity cm3/1000 strokes	: 113.0
Rated speed rpm	: 350	‡	Tolerance cm3/1000 strokes	: + 1.0
rack travel mm Tolerance mm	: -1.80 : +- 0.20	‡	Check tolerance cm3/1000s.	: + 4.0
		±		110
ANEROID/ALTITUDE		Ŧ	CTADITAL SUE NO	TVEDY
COMPENSATOR TEST		I	STARTING FUEL DEL	ד אבע ו

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 108.0

SETTING

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300

Del. quantity cm3/1000 strokes : 34.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.04.97 Test oil : ISO 4113

Combination No. : 0 402 646 739

Injection pump

Pump designation : PE6P120A320LS7904

EP type number : 0 412 626 961

Governor

Governer design. : RQ750PA1326 Governer no. : 0 421 801 815

Cust. part No. : 04222 3926 KY

Customer-spec. information

Customer : KHD

Motor : BF6M1015/C : 239.0 Fower KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 033

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 250 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure par : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 300.00 Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 700

		+ guide sleeve
		+ travel mm : 1.00
Rack travel in mm	: 12.50	+ Tolerance mm : + 0.10
Tolerance mm	: + 0.05	+
		+ Rated speed rpm : 560
Del. quantity		→ guide sleeve
cm3/1000 strokes	: 365.0	+ travel mm : 3.24
		+ Tolerance mm : + 0.10
Tolerance		1 0000
	: +- 1.0	Rated speed rpm : 1154
CIBS TOOD SET ONES	• • • • • • • • • • • • • • • • • • • •	+ guide sleeve
Check tolerance		travel mm : 12.00
cm3/1000s.	: +- 4.0	
CHS/ 10005.	. +- 4.0	+ Tolerance mm : +- 0.10
Sunagal		Data demand man 1270
Spreed		+ Rated speed rpm : 1230
		+ guide sleeve
Tolerance	5.0	+ travel mm : 13.50
cm3/1000 strokes	: 5.0	+ Tolerance mm : + 0.50
		+
Check tolerance		
cm3/1000s.	: 9.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
		+
		+ Rated speed rpm : 700
		+ Aneroid pressure
Rated speed rpm	: 300	hPa : -
Del. quantity		+ Del. quantity
cm3/1000 strokes	: 20.0	+ cm3/1000 strokes : 365.0
Tolerance		+ Tolerance
	: +- 3.0	+ cm3/1000 strokes : + 1.0
Check tolerance		- Check tolerance
cm3/1000s.	: +- 6.0	- cm3/1000s. : +- 4.0
Spreed	5.6	Spreed
Tolerance		Tolerance
cm3/1000 strokes	: 8.0	+ cm3/1000 strokes : 5.0
	. 0.0	
Check tolerance	. 12.0	+ Check tolerance
cm3/1000s.	: 12.0	+ cm3/1000s. : 9.0
		†
(5) 0555510 05 511		†
(B) SETTING OF INJ	ECITON PUMP	
WITH GOVERNOR		+ CONTROL LEVER
		†
· · · · · · · · · · · · · · · · · · ·		+ control lever
GUIDE SLEEVE TRAVE	iL .	+ position degree : 109.0
		+ tolerance degree : + 4.0
, , , , , , , , , , , , , , , , , , , ,	: 745	+
guide steeve		+ RATED SPEED
travel mm	: 4.54	+
Tolerance mm	: +- 0.15	+ rack travel mm : 0.50
		+ Tolerance mm : +- 0.50
Rated speed rpm	: 300	+ Rated speed rpm : 900
guide sleeve		+
travel mm	: 1.24	ASSEMBLY GOVERNOR SETTING
	: +- 0.20	+
	- · - -	+ Rated speed rpm : 750
Rated speed rpm	: 860	+ rack travel mm : 11.50
guide sleeve	. 555	1 1000 01 0700 11111
travel mm	: 5.59	Rated speed rpm : 780
Tolerance mm	: + 0.10	1 · · · · · · · · · · · · · · · · · · ·
TOTALICE MM	0.10	
Dakad award war	. 271	rack travel mm : 5.50
Rated speed rpm	: 271	†

rack travel mm	: 0.50	+
Tolerance mm Rated speed rpm	: ← 0.50 : 900	LOW IDLE
Rated speed rpm rack travel mm	: 11.50	control lever position degree : 67.0 tolerance degree : + 4.0
Rated speed rpm Tolerance 1/min rack travel mm		TORQUE CONTROL
rack travel mm Tolerance mm	: 0.50 : +- 0.50	Rated speed rpm : 700 rack travel mm : 12.50 Tolerance mm : +- 0.05
Rated speed rpm rack travel mm		Start interlock
Rated speed rpm Tolerance 1/min rack travel mm	: 782 : + 4 : 5.50	Rated speed rpm : > 100 Rated speed rpm : < 560 Check
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 900	speed 1/min :> 80 Check speed 1/min : < 580
Rated speed rpm rack travel mm	: 753 : 11.50	STARTING FUEL DELIVERY
Rated speed rpm Tolerance 1/min rack travel mm	: 783 : ← 4 : 5.50	Rated speed rpm : 100 rack travel mm : 20.25
rack travel mm Tolerance mm	: 0.50 : +- 0.50	Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 210.0 Tolerance
Rated speed rpm rack travel mm:	: 754 : 11.50	cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0
Rated speed rpm Tolerance 1/min rack travel mm	: 784 : ← 4 : 5.50	LOW IDLE
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 900	Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 20.0
Rated speed rpm rack travel mm		Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Rated speed rpm Tolerance 1/min rack travel mm	: 785 : ← 4 : 5.50	Spreed - Tolerance - cm3/1000 strokes : 8.0
rack travel mm Tolerance mm	: 0.50 : + 0.50	cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.04.97 Test oil : ISO 4113

Combination No. : 0 402 648 702

Injection pump

Pump designation : PE8P120A320LS7875 EP type number : 0 412 628 881

Governor

Governer design. : RQV250...1150PA1346

Governer no. : 0 421 814 193

Cust. part No. :

Customer—spec. information Customer : DHI Motor : DV15T Power KW : 265.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.20 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 16.00 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3

: -- 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : \sim 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 13.80

Tolerance mm : \leftarrow 0.05

	+ guide sleeve
Del. quantity	+ travel mm : 4.65
cm3/1000 strokes : 222.0	+ Tolerance mm : + 0.25
	†
Tolerance	+ Rated speed rpm : 1390
cm3/1000 strokes : +- 1.0	+ guide sleeve
	+ travel mm : 11.50
Check tolerance	+ Tolerance mm : + 0.50
$cm3/1000s.$: \leftarrow 4.0	†
Spreed	GUIDE SLEEVE POSITION
Tolerance	Ť
cm3/1000 strokes : 7.0	T control loves
Chiby four Schokes : 7.0	control lever
Check tolerance	position degree : - 1
cm3/1000s. : 10.0	Rated speed rpm : 1227
CIID/ 10003 10.0	Rack travel in mm: 12.80
	Tolerance mm : + 1.30
	Foce different . The 1.50
Rated speed rpm : 250	
TOTAL OPOUR I PILL TO	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.60	- SEE COND DECEMENT AT TOLK COND DIOR
Tolerance mm : + 0.10	+ Rated speed rpm : 1150
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 20.0	+ hPa : -
Tolerance	+ Del. quantity
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 222.0
Check tolerance	+ Tolerance
cm3/1000s. : + 6.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : + 4.0
cm3/1000 strokes : 5.0	Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 8.0	+ cm3/1000 strokes : 7.0
	+ Check tolerance
	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
A170 A170 TO A170 TO A170	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	T control loves
Rated speed rom : 1207	tontrol lever position degree : 58.0
Rated speed rpm : 1207 guide sleeve	+ position degree : 58.0 + tolerance degree : + 4.0
travel mm : 8.92	T total and a degree : - 4.0
Tolerance mm : \div 0.15	T control lever
Totel diffe thin . 4- 0.15	position degree : 122.0
Rated speed rpm : 250	tolerance degree : + 4.0
guide sleeve	1 cotte did et a 4.0
travel mm : 1.31	+ RATED SPEED
Tolerance mm : +- 0.20	+ rack travel mm : 12.80
The second secon	+ Rated speed rpm : 1195
Rated speed rpm : 1185	+ Tolerance 1/min : + 5
guide sleeve	-
travel mm : 8.60	+ rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1295
	+ Tolerance 1/min : + 15
Rated speed rpm : 640	+
• • •	+ rack travel mm : 0.50

Tolerance mm	: +- 0.50	+
Rated speed rpm	: 1400	+ Pressure hPa : 350
		rack travel mm : 10.00
		+ Tolerance mm : + 0.20
		+
***************************************		− → Pressure hPa : 735
LOW IDLE		rack travel mm : 12.10
		+ Tolerance mm : $+$ 0.05
		+
control lever		+ Start interlock
position degree	: 85.0	+
tolerance degree	: ← 4.0	+ Rated speed rpm : > 165
_		+ Rated speed rpm : < 190
control lever		+
position degree	: 21.0	+ Check
tolerance degree	: +- 4.0	speed 1/min : > 155
•		+ Check
Testing:		+ speed 1/min : < 210
		+
Rated speed rpm	: 250	
rack travel mm	: 5.60	→ FUEL DELIVERY CHARACTERISTICS
Tolerance mm	: + 0.10	+
		Aneroid pressure
Rated speed rpm	: 150	+ hPa : -
		+ Rated speed rpm : 650
CRT mm min.	: > 7.30	- Del. quantity
		+ cm3/1000 strokes : 241.0
Rated speed rpm	: 300	Tolerance
THE STATE OF THE S		+ cm3/1000 strokes : + 3.0
		- Check tolerance
TORQUE CONTROL		+ cm3/1000s. : + 6.0
1011406 001111102		10000
Rated speed rpm	: 1150	Aneroid pressure
rack travel mm		hPa : -
Tolerance mm	: +- 0.05	Rated speed rpm : 500
. 5661 41105 11111		Del. quantity
Rated speed rpm	: 650	+ cm3/1000 strokes : 123.0
rack travel mm		+ Tolerance
Tolerance mm	· + 0.10	+ cm3/1000 strokes : +- 1.0
TOCET GITCE THAT	0.10	+ Check tolerance
		- + cm3/1000s. : +- 4.0
ANEROID/ALTITUDE		1 4.0
COMPENSATOR TEST		\mathbf{I}
COLUMNIA COL LEGI		
		STARTING FUEL DELIVERY
SETTING		The second second
- C 1 1 2 1 1 C		Rated speed rpm : 100
Rated speed rpm	: 500	Del. quantity
Pressure hPa	: 1500	+ cm3/1000 strokes : 193.0
rack travel mm	: 13.80	+ Tolerance
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : +- 20.0
1000.4.100 17411		Check tolerance
Pressure hPa	-	+ cm3/1000s. : +- 24.0
Rated speed rpm	500	
rack travel mm	: 8.10	1
Tolerance mm	: + 0.20	1
MEASUREMENT		LOW IDLE
· 16/10/01/6: [5/1]		1
Rated speed rpm	: 500	Rated speed rpm : 250
Added speed (Mil	. 200	I weed obeen thin . Est

Del. quantity cm3/1000 strokes	:	20.0
Tolerance	•	2010
cm3/1000 strokes	: +-	3.0
Check tolerance		
	: +	6.0
	:	5.0
		0.0
cm3/1000S.	:	8.0
cm3/1000 strokes	: +-	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 29.04.97 : ISO 4113

Combination No. : 0 402 648 780A

Injection pump

Pump designation : PE8P12OA32OLS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: 2K

Governer no.

: 0 421 815 548

Cust. part No. : 988 04 47

Customer-spec. information

Customer : LIEBHERR

Motor

: D 9408 TI-EA3

Power KW

: 420.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 1 417 413 047

Inlet press. bar :

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm

Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

: 1-8-7-2-6 Firing order

: - 5- 4

: 0-45-90-135-180 Phasing

: -270-315 Tolerance : + 0.30

Check

tolerance *NW

: **←** 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.65

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes :

295.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Tolerance	- - control lever
cm3/1000 strokes : 5.0	position degree : - 1
	Rated speed rpm : 1182
Check tolerance	•
cm3/1000s. : 9.0	- Rack travel in mm : 12.48
	Tolerance mm : +- 1.30
†	•
Rated speed rpm : 350	CHILL LOAD DELTHERY AT THE LOAD CTOD
Rated speed rpm : 350	- FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.50	- Rated speed rpm : 1050
Tolerance mm : + 0.10	- Aneroid pressure
Del. quantity	- hPa : 1600
cm3/1000 strokes : 15.0	- Del. quantity
Tolerance	- cm3/1000 strokes : 295.0
cm3/1000 strokes : + 3.0 + Check tolerance	Tolerance
cm3/1000s. : +- 6.0	- cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed	- cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : 6.0	Tolerance
Check tolerance	- cm3/1000 strokes : 5.0
em3/1000s. : 16.0	Check tolerance
†	- cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	
+	- CONTROL LEVER
	•
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1117	 position degree : 121.0 tolerance degree : +- 4.0
guide steeve	
travel ma : 10.27	- RATED SPEED
Tolerance mm : + 0.15	rack travel mm : 11.65
	Rated speed rpm : 1120
Rated speed rpm : 300	Tolerance 1/min : + 5
guide sleeve + travel mm : 1.11	
travel mm : 1.11 + Tolerance mm : + 0.20 +	- rack travel mm; : 4.00 - Rated speed rpm : 1210
Total alife min	Tolerance 1/min : +- 15
Rated speed rpm : 755	
guide sleeve	rack travel mm : 0.50
travel mm : 6.17	Tolerance mm : + 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1300
Rated speed rpm : 480	•
guide sleeve	•
travel mm : 3.75	
Tolerance mm : + 0.25	LOW IDLE
+	
Rated speed rpm : 1330	
guide sleeve	control lever
travel mm : 13.50 + Tolerance mm : +- 0.50 +	position degree : 71.0 tolerance degree : +- 4.0
TOLET ALLE INTE	totel drive degree : The 4.0
	Testing:
GUIDE SLEEVE POSITION	•
+	Rated speed rpm : 350

rack travel mm	: 4.50	+
Tolerance mm	: +- 0.10	+ Start interlock
Rated speed rpm	• 300	+ Rated speed rpm : > 100
ratea opeca rpm	. 200	Rated speed rpm : < 270
CRT mm min.	. > 5.50	T Mateu speed Tpiii . < 270
CRI MIN MITT.	: > 3.30	Toharl
Dodayl speed was		+ Check
Rated speed rpm	: 400	+ speed 1/min : > 80
		+ Check
		+ speed 1/min : < 290
TORQUE CONTROL		+
Rated speed rpm	: 1050	+ FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 12.65	+
Tolerance mm	: +- 0.05	+ Aneroid pressure
		+ hPa : 1600
Rated speed rpm	: 500	+ Rated speed rpm : 500
rack traval ma	: 10.00	Del. quantity
rack travel mm Tolerance mm	: +- 0.10	+ cm3/1000 strokes : 276.0
roterance imi	; +- 0.10	
Dadad spend	. 000	† Tolerance
Rated speed rpm	. 600	+ cm3/1000 strokes : +- 3.0
rack travel mm Tolerance mm	: 11.80	+ Check tolerance
Tolerance mm	: +- 0.10	+ cm3/1000s. : +- 6.0
		+
Rated speed rpm	; 950	+ Aneroid pressure
rack travel mm	: 12.20	+ hPa : 1600
Tolerance mm	: ← 0.10	+ Rated speed rpm : 800
		+ Del. quantity
Rated speed rpm	: 600	cm3/1000 strckes : 299.0
rack travel mm	: 10.80	+ Tolerance
rack travel mm Tolerance mm	: + 0.20	+ cm3/1000 strokes : +- 3.0
		T UID/ 1000 361 0KE3 , T J. U
Totel arte init	0.20	
Totel affectivit	0.20	+ Check tolerance
-		
ANEROID/ALTITUDE		Check tolerance : + 6.0
-		Check tolerance cm3/1000S. : + 6.0 Aneroid pressure
ANEROID/ALTITUDE		Check tolerance cm3/1000S. : + 6.0 Aneroid pressure hPa : -
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550
ANEROID/ALTITUDE		Check tolerance cm3/1000S. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000S. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000S. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 1050 : 1600	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 1050	Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : + 1.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 1050 : 1600 : 12.65	Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1050 : 1600 : 12.65	Check tolerance cm3/1000S. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0 Spreed
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 1050 : 1600 : 12.65 : ← 0.05	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 1050 : 1600 : 12.65 : ← 0.05 : –	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 1050 : 1600 : 12.65 : + 0.05 : - : 1050 : 8.30	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 1050 : 1600 : 12.65 : + 0.05 : - : 1050 : 8.30	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1050 : 1600 : 12.65 : + 0.05 : - : 1050 : 8.30	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 1050 : 1600 : 12.65 : + 0.05 : - : 1050 : 8.30	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT	: 1050 : 1600 : 12.65 : ← 0.05 : – 1050 : 8.30 : ← 0.20	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1050 : 1600 : 12.65 : ← 0.05 : – 1050 : 8.30 : ← 0.20	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20 : 1050 : 1050	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20 : 1050 : 1050 : 11.80	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 9.20
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20 : 1050 : 1050	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20 : 1050 : 1050 : 11.80	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 9.20
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 1050 : 1600 : 12.65 : ← 0.05 : − : 1050 : 8.30 : ← 0.20 : 1050 : 1050 : 11.80	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000s strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 9.20 Tolerance mm : 9.20 Tolerance mm : +- 0.30 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1050 : 1600 : 12.65 : + 0.05 : - 1050 : 8.30 : + 0.20 : 1050 : 11.80 : + 0.05 : 700	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 9.20 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 140.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1050 : 1600 : 12.65 : + 0.05 : - : 1050 : 8.30 : + 0.20 : 1050 : 1050 : 11.80 : + 0.05	Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 209.0 Tolerance cm3/1000s strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 9.20 Tolerance mm : 9.20 Tolerance mm : +- 0.30 Del. quantity

Check tolerance		
cm3/1000s.	: +-	19.0

			_
1	UM.	TDI	F

Rated speed rpm Del. quantity	:	350	
cm3/1000 strokes	:	15.0	
Tolerance cm3/1000 strokes	: +	3.0	
Check tolerance cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	:	6.0	
Check tolerance cm3/1000s.	:	10.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.04.97 Edition Test oil : 150 4113

Combination No. : 0 402 648 784

Injection pump

Pump designation : PE8P120A320LS7845 EP type number : 0 412 628 861

Governor

Governer design. : RQV350...1050PA1324

Governer no. : 0 421 814 187

Cust. part No. : 0280740202

Customer-spec. information Customer : MB-NFZ Motor : 01402 LA Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlat line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +-2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Overflow quantity

120 min. l/h min. l/h : 120 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Tolerance mm : +--5.55 : +- 0.05

Check

tolerance mm : + 0.70

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

: +- 0.30 Tolerance

Check

tolerance *NW : \leftarrow 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance 'NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.80

Tolerance mm : + 0.05

		├ guide sleeve
Del. quantity		travel mm : 3.56
cm3/1000 strokes	: 208.0	Tolerance mm : + 0.25
Tolerance		Rated speed rpm : 1197
cm3/1000 strokes	: +- 1.0	guide sleeve
CILOT TOOD SET ONCS		travel mm : 10.00
Check tolerance		Tolerance mm : + 0.25
cm3/1000s.	: +- 4.0	Toterance min . F 5.25
CIID7 (0000;	4.0	Rated speed rpm : 1290
Spreed		guide sleeve
opi eed		travel mm : 11.50
Tolerance		Tolerance mm : + 0.50
cm3/1000 strokes	: 6.0	L Toter arice iiiii . += 0.50
Chorlood Strokes	. 0.0	
Check tolerance		GUIDE SLEEVE POSITION
cm3/1000s.	: 9.0	L GOIDE SEELVE FOSTITON
CIID7 10000.	. 7.0	
		control lever
		position degree : - 1
Rated speed rpm	: 350	Rated speed rpm : 1154
varen sheen thus	. 550	T Nated Speed (Mill) : (124)
Rack travel in mm	1: 5.10	Rack travel in mm : 12.90
Tolerance am	: +- 0.10	Tolerance mm : +- 1.30
Del. quantity	. += 0.10	Toterance min : + 1.50
cm3/1000 strokes	: 13.0	
Tolerance	: 13.0	FULL LOAD DELTHERY AT FULL LOAD STOR
cm3/1000 strokes	: +- 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	: += 3.0	Rated speed rom : 1050
cm3/1000s.	: +- 6.0	Aneroid pressure
Spreed		hPa : 1300
Tolerance cm3/1000 strokes	: 6.0	Del. quantity cm3/1000 strokes : 208.0
Check tolerance	: 6.0	cm3/1000 strokes : 208.0 Tolerance
cm3/1000s.	: 10.0	cm3/1000 strokes : + 1.0
Chis/ (UUUS.	: 10.0	Check tolerance
(B) SETTING OF THE	MECTION DUMP	cm3/1000s. : +- 4.0
(B) SETTING OF IN	JECTION PUMP	Spreed
WITH GOVERNOR		Tolerance
		cni3/1000 strokes : 6.0
CHINE OF EEUE TOAL	(5)	Check tolerance : 9.0
GUIDE SLEEVE TRAV	CL "	- UIID/ (UUUS: ; 7.0
Rated speed rpm	: 1107	
guide steeve		
travel mm	: 8.18 -	CONTROL LEVER
Tolerance mm	· +- 0.15	301111VE ===1611
·		control lever
Rated speed rpm	: 350 -	position degree : 121.0
guide sleeve		tolerance degree : + 4.0
travel mm	: 2.02	-
Tolerance mm	: +- 0.20	RATED SPEED
		rack travel mm : 12.80
Rated speed rpm	: 890 -	Rated speed rpm : 1095
guide sleeve		Tolerance 1/min : + 5
travel mm	: 5.70	
Tolerance mm	÷ 0.25	rack travel mm : 4.00
		Rated speed rpm : 1175
Rated speed rpm	: 550	Tolerance 1/min : + 15
	· - 	1

rack travel mm Tolerance mm Rated speed rpm	: ← 0.75	Pressure hPa rack travel mm Tolerance mm Start interlock	: 2.40
LOW IDLE		Rated speed rpm Rated speed rpm	
control lever position degree tolerance degree		Check speed 1/min Check speed 1/min	
Testing:		Speed 17 mm	. < 200
Rated speed rpm rack travel mm Tolerance mm	: 5.10	FUEL DELIVERY CHA	
Rated speed rpm	: 250	+ hPa + Rated speed rpm	: 1300 : 700
CRT mm min.	: > 7.10	Del. quantity cm3/1000 strokes	
Rated speed rpm		Tolerance cm3/1000 strokes	
		Check tolerance cm3/1000s.	: + 5.0
TORQUE CONTROL		+ Spreed + Tolerance	
Rated speed rpm rack travel mm		+ cm3/1000 strokes + Check tolerance	: 8.0
Tolerance mm		cm3/1000s.	: 12.0
Reted speed rom rack travel mm Tolerance mm	: 14.60	Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1300 : 1050
Rated speed rpm rack travel mm	: 14.20	Del. quantity cm3/1000 strokes Tolerance	
Tolerance mm		cin3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm	: 10.80	- cm3/1000s.	: ← 5.0
Tolerance mm	: + 0.15	+ Aneroid pressure + hPa - + Rated speed rpm	: - : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes	
		Tolerance cm3/1000 strokes	: +- 1.0
SETTING		Check tolerance cm3/1000s.	: + 4.0
Pressure hPa Rated speed rpm	: - : 500	Spreed Tolerance	. • • •
MEASUREMENT		cm3/1000 strokes Check tolerance	
Pressure hPa rack travel mm Tolerance mm	: 350 : 0.65 : +- 0.05	cm3/1000s.	: 12.0

STARTING FUEL DELIVERY

Rated speed rpm : Del. quantity cm3/1000 strokes : 100

250.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : + 14.0

LOW IDLE

:	350	
:	13.0	
: +-	3.0	
: +-	6.0	
:	6.0	
:	10.0	
	: +- : +- :	: 13.0 : + 3.0 : + 6.0 : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25,04.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 670 803

Injection pump

Pump designation : PE12P12OA520/5RS7146

EP type number : 0 412 620 808

Governor

Governer design. : RSUV325...1150P0A358

Governer no. : 0 421 829 105

Cust. part No. :

Customer-spec. information

Customer : MWM

: TBD234V12 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2A- 9-10A- 5- 6A

: 11-12A- 3- 4A- 7

: 8A (A=Abschalteleme

: nte)

: 0-30-60-90-120-150 Phasing : 180-210-240-270-300

: 330

Tolerance : **←** 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm: 14.95

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 261.0

		+	Del. qu
Tolerance cm3/1000 strokes	: +- 1.0	‡	cm3/100 Tolerar
Check tolerance cm3/1000s.	: + 4.0	†	cm3/100 Check t cm3/100
Spreed		+	Spreed Tolerar cm3/100
Tolerance cm3/1000 strokes	: 5.0		Check t cm3/100
Check tolerance cm3/1000s.	: 9.0	Ŧ	CONTROL
		+	
Rated speed rpm	: 325	+	control positic tolerar
Rack travel in mm Tolerance mm	: 6.10 : + 0.10		control
Del. quantity cm3/1000 strokes Tolerance	: 35.0		positio tolerar
cm3/1000 strokes Check tolerance	: ← 5.0	Ī	RATED S
cm3/1000s. Spreed	: ← 8.0		Rated s Tolerar
Tolerarice cm3/1000 strokes Check tolerance	: 6.0	Ī	rack to Rated s
cm3/1000s.	: 10.0		Tolerar
(B) SETTING OF IN. WITH GOVERNOR	ECTION PUMP	+	rack tr Tolerar Rated s
GUIDE SLEEVE POSIT	TION	‡	LOW IDL
control lever position degree Rated speed rpm		+	control positio
Rack travel in mm		+	tolerar
Tolerance mm governor spring	: 0.20	+	control positio tolerar
pre-tension click setting x	: 4.00	+	Setting
FILL LOAD DELTVERY	' AT FULL LOAD STOP		Rated s
Rated speed rpm	: 800		Tolerar
Aneroid pressure	: 900	+	Testing
		}	Dated o

Del. quantity	
cm3/1000 strokes Tolerance	: 261.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s. Spreed	: ← 4.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 60.0 : ← 4.0
control lever position degree tolerance degree	
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 13.90 : 1195 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1295 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1440
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : +- 4.0

ance degree : +- 4.0

llever

on degree : 23.0 ince degree : + 4.0

g point w/out bumper spring

speed rpm : 325 travel mm : 6.60 ance mm : + 0.20

g:

Rated speed rpm : 325

rack travel mm	: 6.10	+ Aneroid pressure	
Tolerance mm	: + 0.10	+ hPa : -	
10101 01100 1111		Rated speed rpm : 1100	
rack travel mm	: 2.00	+ Del. quantity	
Rated speed rpm		- cm3/1000 strokes : 0.1	
Tolerance 1/min			
loterance limin	: + 50	† Tolerance	
		+ cm3/1000 strokes : $+$ 0.1	
	···		
TORQUE CONTROL		+ Aneroid pressure	
		+ hPa : -	
Rated speed rpm	: 800	+ Rated speed rpm : 1100	
rack travel mm		+ Del. quantity	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 45.0	
		+ Tolerance	
Rated speed rpm	: 1150	+ cm3/1000 strokes : + 25.0	
rack travel mm		+	
Tolerance mm		+ Aneroid pressure	
		hPa : -	
Rated speed rpm	: 1100	Rated speed rpm : 500	
rack travel mm		Del. quantity	
Tolerance mm	: + 0.10	cm3/1000 strokes : 130.0	
TOTAL GILLE UMI		Tolerance	
Rated speed rpm	. 1100	+ cm3/1000 strokes : +- 2.0	
rack travel mm			
		+ Check tolerance	
Tolerance mm	: ← 0.10	+ cm3/1000s. : + 4.0	
		†	
ANEROID/ALTITUDE			
COMPENSATOR TEST		STARTING FUEL DELIVERY	
		†	
		+ Rated speed rpm : 100	
SETTING		+ Del. quantity	
		+ cm3/1000 strokes : 220.0	
Pressure hPa	-	† Tolerance	
Rated speed rpm		+ cm3/1000 strokes : +- 20.0	
		+	
rack travel mm			
rack travel mm Tolerance mm	: 9.50 : + 0.10	+	
Tolerance mm		‡	
			
Tolerance mm MEASUREMENT		LOW IDLE	
Tolerance mm		LOW IDLE	
Tolerance mm MEASUREMENT	: ← 0.10	+	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm	: ← 0.10 : 725	Rated speed rpm : 325	
Tolerance mm MEASUREMENT Pressure hPa	: ← 0.10 : 725 : 14.75	Rated speed rpm : 325 Del. quantity	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm	: ← 0.10 : 725 : 14.75	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm	: ← 0.10 : 725 : 14.75	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm	: ← 0.10 : 725 : 14.75	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm	: ← 0.10 : 725 : 14.75	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock	: + 0.10 : 725 : 14.75 : + 0.05	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm	: + 0.10 : 725 : 14.75 : + 0.05	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA	: + 0.10 : 725 : 14.75 : + 0.05	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure	: + 0.10 : 725 : 14.75 : + 0.05	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: + 0.10 : 725 : 14.75 : + 0.05	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150 : 260.0	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150 : 260.0	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150 : 260.0 : + 3.0	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	
Tolerance mm MEASUREMENT Pressure hPa rack travel mm Tolerance mm Start interlock FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: + 0.10 : 725 : 14.75 : + 0.05 RACTERISTICS : 900 : 1150 : 260.0	Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 24.04.97 Test oil : ISO 4113

Combination No. : 0 402 676 830

Injection pump

Pump designation : PE6P12OA32OLS7894 EP type number : 0 412 626 954

Governor

Governer design. : RSV600...1050P0A642

Governer no. : 0 421 833 556

Cust. part No. : 0270746002

Customer-spec. information
Customer : MB-NFZ
Motor : CM 441 LA
Power KW : 285.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40 Tolerance *C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 105 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.75
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 19.00 Tolerance mm : + 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-45-120-165-240

: 5

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- G.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1075

1013

Pagis Americal Str. 100 47 70	
Rack travel in mm: 13.70 + Tolerance mm: + 0.05 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 251.0	Rated speed rpm : 1075 Aneroid pressure
Tolerance + 1.0	hPa : - Del. quantity cm3/1000 strokes : 251.0
Check tolerance	Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. : + 4.0	Check tolerance cm3/1000s. : +- 4.0
Spreed	Spreed Tolerance
Tolerance cm3/1000 strokes : 6.0	cm3/1000 strokes : 6.0 Check tolerance
Check tolerance cm3/1000s. : 9.0	cm3/1000s. : 9.0
	CONTROL LEVER
Pated around are	and the same
Rated speed rpm : 600	control lever position degree : 89.0
Rack travel in mm: 4.10	position degree : 89.0 tolerance degree : + 4.0
Tolerance mm : + 0.10	110
Del. quantity	RATED SPEED
cm3/1000 strokes : 17.0 +	rack travel mm : 12.70
Tolerance +	Rated speed rpm : 1115
cm3/1000 strokes : + 3.0 + Check tolerance	Tolerance 1/min : ← 5 Check
cm3/1000s. : + 6.0	speed 1/min : + 10
Spreed	5pccd 1/10111
Tolerance	
cm3/1000 strokes : 8.0 + Check tolerance	
cm3/1000s. : 12.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR	position degree : 73.0
1	tolerance degree : +- 4.0
CUIDE OF FUE DOCUTION	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 600
	rack travel mm : 4.10
control lever	Tolerance mm : +- 0.10
position degree : -3	
Rated speed rpm : 800	rack travel mm : 2.00
Rack travel in mm: 0.50	Rated speed rpm : 630 Tolerance 1/min : + 30
Tolerance mm : + 0.20	SET IDLE AUXILIARY SPRING
governor spring	OF INTE MONITHME SENTING
pre-tension + click setting x : 1.50	rack travel mm : 2.00
+	

TORQUE CONTROL

1075 Rated speed rpm 13.70 rack travel mm Toterance mm : + - 0.05

008 Rated speed rpm rack travel mm 14,75 Tolerance mm : + 0.10

Rated speed rpm 1000 14.35 rack travel mm : Tolerance mm : **←** 0.15

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 291.0

Tolerance

cm3/1000 strokes 1.0

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 290.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 600

Del. quantity

cm3/1000 strokes : 17.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.04.97 Test oil : ISO 4113

Combination No. : 0 402 678 816

Injection pump

Pump designation : PE8P120A320LS7857 EP type number : 0 412 628 866

Governor

Governer design. : RSV550...1050P0A826

: 3

Governer no. : 0 421 833 382

Cust. part No. : 0230743102

Customer—spec. information
Customer : MB-NFZ
Motor : CM442LA
Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 110 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1080

Rack travel in mm: 13.55

Toterance mm : +- 0.05	+ Rated speed rpm : 1080 + Aneroid pressure
Del. quantity cm3/1000 strokes : 260.0	hPa : - Del. quantity
	+ cm3/1000 strokes : 260.0
Tolerance cm3/1000 strokes : +- 1.0	+ Tolerance + cm3/1000 strokes : + 1.0 + Check tolerance
Check tolerance cm3/1000S. : + 4.0	cm3/1000s. : +- 4.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 5.0
Tolerance	+ Check tolerance + cm3/1000s. : 9.0
cm3/1000 strokes : 5.0	‡
Check tolerance cm3/1000S. : 9.0	CONTROL LEVER
	control lever
Rated speed rpm : 550	<pre>position degree : 90.0 tolerance degree : + 4.0</pre>
	toterance degree . 1- 4.0
Rack travel in mm : 3.80 Tolerance mm : +- 0.10	+ ASSEMBLY GOVERNOR SETTING
Del. quantity	+
cm3/1000 strokes : 19.0	Rated speed rpm : 1111
Tolerance cm3/1000 strokes : + 3.0	Tolerance 1/min : + 1 rack travel mm : 12.50
Check tolerance	+
cm3/1000s. : + 6.0 Spreed	+ Rated speed rpm : 1145 + Tolerance 1/min : +- 4
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 8.0	0.05
Check tolerance cm3/1000S. : 12.0	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP	Ţ
WITH GOVERNOR	+ Rated speed rpm : 1113 + Tolerance 1/min : + 1
	Tolerance 1/min : +- 1 + rack travel mm : 12.50
	+
GUIDE SLEEVE POSITION	+ Rated speed rpm : 1147 + Tolerance 1/min : +- 4
	rack travel mm : 4.00
control lever position degree : - 3	rack travel mm : 0.85
position degree : - 3 Rated speed rpm : 800	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
	Rated speed rpm : 1300
Rack travel in mm : 0.50 Tolerance mm : + 0.20	1
roterance min . To 0.20	Rated speed rpm : 1115
governor spring	+ Tolerance 1/min : + 1
<pre>pre-tension click setting x : 2.00</pre>	+ rack travel mm : 12.50
selen seering n	Rated speed rpm : 1149
FIGURE AND DELTHEDY AT FIRE LOAD OTCO	Tolerance 1/min : +- 4
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 4.00

rack travel mm	: 0.85	+
Tolerance mm		SET IDLE AUXILIARY SPRING
Rated speed rpm	: 1300	rack travel mm : 2.00
Rated speed rpm	: 1117	
Tolerance 1/min	: + 1	+ TORQUE CONTROL
rack travel mm	: 12.50	† "
Rated speed rpm	: 1151	+ Rated speed rpm : 1080 + rack travel mm : 13.55
Tolerance 1/min		+ Tolerance mm : + 0.05
rack travel mm		1000141100 11111
		+ Rated speed rpm : 1000
rack travel mm		+ rack travel mm : 13.70
Tolerance mm		† Tolerance mm : + 0.10
Rated speed rpm	: 1300	Rated speed rpm : 600
		+ rack travel mm : 14.10
Rated speed rpm		Tolerance mm : + 0.10
Tolerance 1/min		+
rack travel mm	: 12.50	†
Rated speed rpm	: 1153	Start interlock
Tolerance 1/min		I
rack travel mm		
		+ FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 0.85	†
Tolerance mm		+ Aneroid pressure
Rated speed rpm	: 1300	+ hPa : - Rated speed rpm : 600
		+ Del. quantity
rack travel mm	: 12.50	+ cm3/1000 strokes : 292.0
		+ Tolerance
rack travel mm	: 4.00	+ cm3/1000 strokes : + 2.0
rack travel mm	: 0.85	+ Check tolerance + cm3/1000s. : ← 5.0
Tolerance mm	: +- 0.55	+ Spreed
TOCCI CATEC THAT	0.55	+ Tolerance
LOW IDLE		+ Check tolerance
		+ cm3/1 000 s. : 12.0
control lever		İ
position degree	: 70.0	
tolerance degree		+ STARTING FUEL DELIVERY
		†
Testing:		+ Rated speed rpm : 100
Rated speed rpm	: 550	+ Del. quantity + cm3/1000 strokes : 280.0
rack travel mm		+ Tolerance
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : + 10.0
		+ Check tolerance
rack travel mm		+ cm3/1000s. : +- 14.0
Rated speed rpm Tolerance 1/min		†
TOLET MILE TAMEN	: ← 30	Ī
Rated speed rpm	: 100	
		+ LOW IDLE
CRT mm min.	: > 19.50	t Dated and the FFO
		+ Rated speed rpm : 550

Del. quantity cm3/1000 strokes	•	19.0
Tolerance	•	17.0
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s. Spreed	: +-	6.0
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		12.0
CHO/TOUS.	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 402 678 835

Injection pump

Pump designation : PE8P12OA32OLS7844 EP type number : 0 412 628 860

Governor

Governer design. : RSV350...1050P0A673

Governer no. : 0 421 833 590

Cust. part No. : 0270746802

Customer—spec. information
Customer : MB—NFZ
Motor : 0M442LA
Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.50 Tolerance mm: + 0.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 15.30 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 272.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 272.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Check tolerance cm3/1000s. : 9.0	CONTROL LEVER
Rated speed rpm : 350	position degree : 96.0 tolerance degree : + 4.0
Rack travel in mm: 5.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 19.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000 strokes: 12.0 (B) SETTING OF INJECTION PUMP	RATED SPEED rack travel mm : 14.30 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 5 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1400
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION control lever position degree : - 3	control lever position degree : 75.0 tolerance degree : + 4.0 Testing:
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 350 rack travel mm : 5.00 Tolerance mm : +- 0.10
governor spring pre-tension click setting x : 3.75	rack travel mm : 2.00 Rated speed rpm : 395 Tolerance 1/min : + 30
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.50
Rated speed rpm : 1050 +	SET IDLE AUXILIARY SPRING

rack travel mm	: 2.00	
TORQUE CONTROL		
Rated speed rpm	: 1050	
rack travel mm	: 15.30	
Tolerance mm	: + 0.05	
Data dana adam	: 800	
Rated speed rpm rack travel mm	: 800 : 15.30	
Tolerance mm	: + 0.10	
ANEROID/ALTITUDE		
COMPENSATOR TEST		*
SETTING		
Pressure hPa	• –	
rressure nra Rated speed rpm	500	
•	. 555	
MEASUREMENT		
Pressure hPa	: 400	
rack travel mm	: 1.70	
Tolerance mm	: ← 0.05	
Pressure hPa	: 1000	
rack travel mm	: 6.65	
Tolerance mm	: + 0.15	
Start interlock		
Stent Intertott		
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure		
	. 1200	
hPa	: 1200 : 800	
hPa Rated speed rpm	: 1200 : 800	
hPa Rated speed rpm Del. quantity cm3/1000 strokes		
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 800 : 274.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 800	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 800 : 274.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 800 : 274.0 : ← 3.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 800 : 274.0 : ← 3.0 : ← 6.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 800 : 274.0 : ← 3.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 800 : 274.0 : ← 3.0 : ← 6.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 800 : 274.0 : ← 3.0 : ← 6.0 : 8.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 800 : 274.0 : ← 3.0 : ← 6.0 : 8.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 800 : 274.0 : ← 3.0 : ← 6.0 : 8.0 : 12.0 : –	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 800 : 274.0 : ← 3.0 : ← 6.0 : 8.0	

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: + 1.0 : + 4.0 : 8.0
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes Tolerance	: 270.0
cm3/1000 strokes Check tolerance	: + 15.0
cm3/1000s.	: +- 19.0
LOW IDLE	
Rated speed rpm Del. quantity	: 350
cm3/1000 strokes Tolerance	: 19.0
cm3/1COO strokes Check tolerance	: + 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 603

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ300/1050PA999-7

: 0 421 801 799 Governer no.

Cust. part No. : CCEP 5153 66-224

Customer-spec. information

Customer : RENAULT V.I. Motor : MIHRO62045 A41

Power KW : 183.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 : +- 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70 Tolerance mm : + - 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Phasing Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : -0.50 Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

CRT ZERO POSITION

Rack travel in mm: 12.40 Tolerance mm : + 0.05

BASIC SETTING

Rated speed rpm : 600

	1	Rated speed rpm : 594
Tolerance mm	: + 0.05	guide sleeve travel mm : 5.11
Del. quantity cm3/1000 strokes	: 197.0	Tolerance mm : + 0.10
Tolerance	+	Rated speed rpm : 720 guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 6.00 Tolerance mm : +- 0.10
Check tolerance cm3/1000s.	: + 4.0	Rated speed rpm : 1380 guide sleeve
Spreed		travel mm : 11.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 9.0	GOIDE SEELVE FOSTITION
	 †	control lever position degree : 109 Rated speed rpm : 800
Rated speed rpm	: 275	Rack travel in mm : 20.00
Rack travel in mm Tolerance mm	: -6.70 : + 0.10	Tolerance mm : +- 0.80
Del. quantity cm3/1000 strokes Tolerance	: 36.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: +- 2.0	Rated speed rpm : 600 Aneroid pressure
cm3/1000s. Spreed	: + 5.0	hPa : 1000 Del. quantity
Tolerance cm3/1000 strokes	: 8.0	cm3/1000 strokes : 197.0 Tolerance
Check tolerance cm3/1000s.	: 12.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
(B) SETTING OF IN	JECTION PUMP	Spreed Tolerance
WITH GOVERNOR	†	cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAV	EL	cm3/1000s. : 9.0
Rated speed rpm guide sleeve	: 1145	CONTROL LEVER
travel mm Tolerance mm	: 6.55 : + 0.15	control lever
Rated speed rpm guide sleeve	: 275	position degree : 276.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 1.75 : + 0.20	RATED SPEED rack travel mm : -1.00
Rated speed rpm guide sleeve	: 1050	Rated speed rpm : 1130 Tolerance 1/min : +- 15
travel mm Tolerance mm	: 6.00 : + 0.10	rack travel mm : -8.40 Rated speed rpm : 1260 Tolerance 1/min : +- 5

rack travel mm Tolerance mm Rated speed rpm	: -11.90 : +- 0.50 : 1375
LOW IDLE	
control lever position degree tolerance degree	: 254.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : -6.70 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 475
Rated speed rpm	: 175
CRT mm min.	: < -4.80
TORQUE CONTROL	
Rated speed rpm Tolerance mm	: 600 : + 0.05
Rated speed rpm Tolerance mm	: 1050 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	garanten en en en en en en en en en en en en e
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1000
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : -1.75 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 220 : -0.85 : +- 0.15

Pressure hPa rack travel mm Tolerance mm	: 160 : −1.25 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 195
Check speed 1/min Check	: > 80
speed 1/min	: < 215
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1000 : 1050
cm3/1000 strokes	: 198.0
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s.	: + 6.0
Aneroid pressure hra	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 153.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s.	: ← 4.0
STARTING FUEL DEL	LVERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 150.0
Tolerance cm3/1000 strokes	: + 15.0
Check tolerance cm3/1000s.	: + 19.0
LOW IDLE	
Rated speed rpm Del. quantity	: 275
cm3/1000 strokes Tolerance	: 36.0
cm3/1000 strokes	: +- 2.0

Check tolerance cm3/1000S. : + 5.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 606

Injection pump

Pump designation : PES6P110A720RS7406

EP type number : 0 412 716 810

Governor

Governer design. : RQV300...1050PA1090

: 1K

Governer no. : 0 421 815 497

Cust. part No. : 9279607

Customer-spec. information Customer : LIEBHERR : 0 926 TI-E Motor Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temo. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 125 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: x Length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: Tolerance bar : + 1.0

Prestroke mm 3.65 : + 0.05Tolerance mm Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.00 : +- 1.00 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.80 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.	: + 4.0	
Spreed		+ GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1180
Check tolerance cm3/1000s.	: 9.0	Rack travel in mm : 12.80 Tolerance mm : +- 2.00
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	 : ← 0.10 : 25.0 : ← 3.0 : ← 6.0 : 6.0 : 10.0 	Rated speed rpm : 1050 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
CUITAG OL FENJE TOA	A (PD)	CONTROL LEVER
GUIDE SLEEVE TRA Rated speed rpm guide sleeve	: 1117	control lever position degree : 116.0 tolerance degree : +- 4.0
Tolerance mm Rated speed rpm	; → · · 0.1 5	+ RATED SPEED + rack travel mm: : 12.80 + Rated speed rpm : 1090 + Tolerance 1/min : + 5
guida steeve trivel man Tolerance mm	: 1.86	rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 6.17	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300
Rated speed rpm guide sleeve travel mm Tolerance mm		LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm		control lever position degree : 71.0 tolerance degree : + 4.0

Testir	ıg:
Da+ad	c n

350 Rated speed rom rack travel mm 5.20 Tolerance mm : + - 0.10

Rated speed rpm 250

: > CRT mm min. 7,40

420 Rated speed rpm

TORQUE CONTROL

Rated speed rpm 1050 rack travel mm 13.80 Tolerance mm : **←** 0.05

Rated speed rpm 500 10.90 rack travel mm Tolerance mm : + 0.15

Rated speed rpm 800 12.70 rack travel mm Tolerance mm : +- 0.15

Rated speed rpm 950 rack travel nim 13.35 Tolerance mm : + 0.10

Rated speed rpm 600 rack travel mm 11.45 Tolerance non : +- 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

1050 Rated speed rpm Pressure hPa 1600 rack travel num 13.80 : +- 0.05 Tolerance mm

Pressure hPa Rated speed rpm 1050 rack travel mm 10.55 : + 0.15Tolerance mm

MEASUREMENT

1050 Rated speed rpm :

940 Pressure hPa rack travel mm 13.00 : Tolerance mm : +- 0.05 Pressure hPa 670 rack travel mm 11.50 : + - 0.10Tolerance mm

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1600 Rated speed rpm 500 Del. quantity

cm3/1000 strokes :

Tolerance cm3/1000 strokes : \leftarrow 3.0

194.0

6.0

Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa 1600 Rated speed rpm 800 Del. quantity cm3/1000 strokes : 201.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 184.0

Tolerance

cm3/1000s.

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 10.60 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 175.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm Del. quantity	:	350
cm3/1000 strokes	:	25.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	6.0
cm3/1000s.	:	10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29,04,97 Test oil : ISO 4113

Combination No. : 0 402 746 606A

Injection pump

Pump designation : PES6P110A720RS7406 EP type number : 0 412 716 810

Governor

Governer design. : RQV300...1050PA1090

: 1K

: 0 421 815 497 Governer no.

Cust. part No. : 9279607

Customer-spec. information Customer : LIEBHERR Motor : D 926 TI-E : 230.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 : ← 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity
min. L/h : 125
Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 3.65 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.00 Tolerance mm : + 1.00

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

Tolerance : **←** 0.30

Check

tolerance *NW : +- 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.80 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.	: ← 4.0	GUIDE SLEEVE POSITION
Spreed		+ GOIDE SCEENE POSITION
Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1180
Check tolerance cm3/1000s.	: 9.0	Rack travel in mm : 12.80 Tolerance mm : + 2.00
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 0.10 : 25.0 : ← 3.0 : ← 6.0 : 6.0 : 10.0	Rated speed rpm : 1050 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1090s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
GUIDE SLEEVE TRAV	/C1	- control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1102 : 10.05 : + 0.15 : 350 : 1.86 : + 0.20	position degree : 116.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1090 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 749 : 6.11 : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300
Rated speed rpm guide sleeve travel mm Tolerance mm	: 480 : 3.75 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1330 : 13.50 : + 0.50	control lever position degree : 71.0 tolerance degree : + 4.0

Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.20 : ← 0.10
Rated speed rpm	: 250
CRT mm min.	: > 7.40
Rated speed rpm	: 420
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerunce mm	: 1050 : 13.80 : + 0.65
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.90 : + 0.15
Rated speed rpm rack travel mm	: 800 : 12.70

: **←** 0.15

: +- 0.10

950

13.35

ANEROID/ALTITUDE COMPENSATOR TEST

Tolerance mm

Tolerance mm

Rated speed rpm

rack travel min :

SETTING

Rated speed rpm Pressure hPa rack travel mm	:	1050 1600 13,80
Tolerance mm	:	+ 0.05

Pressure hPa	:	
Rated speed rpm	:	1050
rack travel mm	:	10.55
Tolerance mm	: 4	─ 0.10

MEASUREMENT

Rated speed rpm :- 105	Rated	speed rpa	m :-	1050
------------------------	-------	-----------	------	------

Pressure hPa	:	940
rack travel mm	:	13.00
Tolerance mm	: +-	- 0.05

Pressure hPa	:	670	
rack travel mm	:	11.50	Ì
Tolerance mm	:	+- 0.10	ı

Start interlock

FUEL DELIVERY CHARACTERISTICS

TOLL DELIVERT	CHARA	C 1 L1	1101100
Aneroid pressu	ıre		
hPa	:	•	1600
Rated speed r			500
Del. quantity	•		300
cm3/1000 strol	ces :		194.0
Tolerance	. 65		174.0
cm3/1000 strol		A	3.0
		T	5.0
Check tolerand	e .		
cm3/1000S.	:	+-	6.0
Anonoid mason			
Aneroid pressu			1/00
hPa	:	Ī	1600
Rated speed r			800
Del. quantity			
cm3/1000 strol	ces :		201.0
Tolerance			
cm3/1000 strol	ces :	+-	3.0
Check tolerand			
cm3/1000s.	:	+-	6.0
	Ť		
Aneroid pressu	ıre		
hPa	:		-
Rated speed r			500
Del. quantity			
cm3/1000 strol			184.0
Tolerance			104.0
cm3/1000 strok	ces :	4	1.0
Check tolerand		-	1.0
	,e		4.0
cm3/1000s.	;	+-	4.0
Spreed			
Tolerance			
cm3/1000 strol			8.0
Check tolerand	e		
cm3/1000s.	:		12.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	10.60
Tolerance mm	: 1	-0.20
Del. quantity		
cm3/1000 strokes	:	175.0
Tolerance		
cm3/1000 strokes	: 1	- 10.0
Check tolerance		
cm3/1000s.	: 4	- 14.0

LOW IDLE

Rated speed rpm : 350
Del. quantity
cm3/1000 strokes : 25.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000 strokes : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.04.97 : ISO 4113

Combination No. : 0 402 746 640

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQV300...1050PA1191

Governer no. : 0 421 814 114

Cust. part No. : CCEP 5147C 66-223

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDR 06.20.45 C4 : 188.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance *C

2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter:

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.70
Tolerance mm : + 0.50

Tolerance mm

: +- 0.50

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.25

Tolerance mm : + 0.75

Firing order : 1-5- 3- 6- 2-

Phasing

: **0-60-120-180**-240 Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : -0.95

Tolerance

: +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 1

CRT ZERO POSITION

Rack travel in mm: 12.70

Tolerance mm : \leftarrow 0.05

BASIC SETTING

Rated speed rpm : 700

J20

	+ guide sleeve
Del. quantity	travel mm : 2.40
cm3/1000 strokes : 199.0	+ Tolerance mm : + 0.25
(m)/1000 3t/10Kes . 177.0	T Total and 1 0.25
Tolonopo	Total mand one (45)
Tolerance	+ Rated speed rpm : 415
cm3/1000 strokes : + 1.0	+ guide sleeve
	+ travel mm : 3.28
Check tolerance	+ Tolerance mm : + 0.25
cm3/1000s, : + 4.0	
(110) (0000)	Rated speed rpm : 460
Spreed	+ guide sleeve
	+ travel mm : 3.86
Tolerance	+ Tolerance mm : + 0.25
cm3/1000 strokes : 5.0	1
	+ Rated speed rpm : 1460
Check tolerance	guide sleeve
cm3/1000s, : 9.0	+ travel mm : 11.50
	+ Tolerance mm : $+$ 0.50
	+
Rated speed rpm : 300	GUIDE SLEEVE POSITION
water speed i bii . Soo	T SOUR SELEVE TOSTITON
0 - 1 Am - 1 Am	Ť
Rack travel in mm : -7.20	†
Tolerance mm : → 0.10	+ control lever
Del. quantity	+ position degree : - 1
cm3/1000 strokes : 31.0	+ Rated speed rpm : 1230
Tolerance	
cm3/1000 strokes : + 2.0	Rack travel in mm: 11.70
Check tolerance	+ Tolerance mm : +- 2.00
cm3/1000s. : + 5.0	+
Spreed	+
Tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	+
cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 700
cm3/1000 strokes : 8.0	Rated speed rpm : 700 Aneroid pressure
cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 700
cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 700 Ancroid pressure hPa : 1000
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 700 Android pressure HPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 700 Android pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 700 Android pressure HPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000 strokes : 8.0 Check tolerance cm3/10008. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 700 Android pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/10005. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed
cm3/1000 strokes : 8.0 Check tolerance cm3/10005. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/10005. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes: 8.0 Check tolerance cm3/10005.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/10005. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes: 8.0 Check tolerance cm3/10005.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes: 8.0 Check tolerance cm3/10005.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : + 0.25 Rated speed rpm : 300	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve	Rated speed rpm : 700 Android pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s : +- 1.0 Check tolerance cm3/1000s : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve	Rated speed rpm : 700 Android pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s. : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1140 guide sleeve travel mm: 8.49 Tolerance mm: : 40.25 Rated speed rpm: 300 guide sleeve travel mm: 1.33 Tolerance mm: : + 0.25	Rated speed rpm : 700 Ameroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33	Rated speed rpm : 700 Ameroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 302.0
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 754	Rated speed rpm : 700 Ameroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 302.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 754 guide sleeve	Rated speed rpm : 700 Ameroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 302.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1140 guide sleeve travel mm: : 8.49 Tolerance mm: : + 0.25 Rated speed rpm: 300 guide sleeve travel mm: : 1.33 Tolerance mm: : + 0.25 Rated speed rpm: 754 guide sleeve travel mm: 754 guide sleeve travel mm: 6.10	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 302.0 tolerance degree : +- 4.0
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1140 guide sleeve travel mm : 8.49 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 754 guide sleeve	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s. : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 302.0 tolerance degree : +- 4.0 RATED SPEED
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1140 guide sleeve travel mm: 8.49 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.33 Tolerance mm: + 0.25 Rated speed rpm: 754 guide sleeve travel mm: 6.10 Tolerance mm: + 0.25	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 302.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : -1.00
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1140 guide sleeve travel mm: : 8.49 Tolerance mm: : + 0.25 Rated speed rpm: 300 guide sleeve travel mm: : 1.33 Tolerance mm: : + 0.25 Rated speed rpm: 754 guide sleeve travel mm: 754 guide sleeve travel mm: 6.10	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s. : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 302.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1150
Cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1140 guide sleeve travel mm: 8.49 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.33 Tolerance mm: + 0.25 Rated speed rpm: 754 guide sleeve travel mm: 6.10 Tolerance mm: + 0.25	Rated speed rpm : 700 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 199.0 Tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 302.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : -1.00

-8.70rack travel mm Rated speed rpm 1305 Tolerance 1/min 15 rack travel mm -12.20Tolerance mm : +- 0.50 Rated speed rpm 1400 LOW IDLE control lever position degree : 266.0tolerance degree : +- 4.0 Testing: 300 Rated speed rpm -7.20rack travel mm Tolerance mm : +- C.10 Rated speed rpm 200 CRT mm max. : < -4.80 Rated speed rum 370 TORQUE CONTROL 700 Rated speed rpm Rated speed rpm 1050 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1000 Pressure hPa Rated speed rpm 500 rack travel mm -1.20Tolerance mm 0.20 **MEASUREMENT** Rated speed rpm 500

140

-0.80

Tolerance mm : +- 0.15Pressure hPa 200 -0.35rack travel mm Tolerance mm : + - 0.05Start interlock Rated speed rpm : > 100 Rated speed rpm : < 220 Check speed 1/min : > 80 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm 1050 Del. quantity cm3/1000 strokes : 201.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-4.0 STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/1000s. : + 19.0LOW IDLE

Rated speed rpm

cm3/1000 strokes :

Del. quantity

300

31.0

Pressure hPa

rack travel mm

Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0

Spreed Tolerance

8.0 cm3/1000 strokes :

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

combination No. : 0 402 746 645

Injection pump

Pump designation : PES6P120A320RS7364 EP type number : 0 412 726 930

Governor

Governer design. : RQV300...1050PA1204

Governer no. : 0 421 814 123

Cust. part No. : CCEP 5148A 66-236

Customer-spec. information

Customer : RENAULT V.I. : MIDR 06.20.45041 Motor

Power KW : 219.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 ber Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : → 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : ÷- 0.30 Phasing

Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

*NW after s.o.d. : -0.40

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm: 13.90 Tolerance mm : +- 0.05

BASIC SETTING

Rated speed rpm : 600

	l guido al seve
	+ guide sleeve
Del. quantity cm3/1000 strokes : 290.0	travel mm : 2.40 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 415 guide sleeve
	+ travel mm : 3.28
Check tolerance cm3/1000s. : +- 4.0	Tolerance mm : +- 0.25
	+ Rated speed rpm : 460
Spreed	<pre>guide sleeve travel mm : 3.86</pre>
Tolerance	+ Tolerance mm : + 0.25
cm3/1000 strokes : 5.0	+
	Rated speed rpm : 1460
Check tolerance	de guide sleeve
cm3/1 00 0s. : 9.0	+ travel mm : 11.50
	+ Tolerance ma : +- 0.50
	+
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Nated speed (pill . 300	T GOIDE SECENT POSITION
Rack travel in mm: -7.60	+
Tolerance mn : + 0.10	+ control lever
Del. quantity	<pre> position degree : − 1 </pre>
cm3/1000 strokes : 26.0	+ Rated speed rpm : 1230
Tolerance	+
cm3/1000 strokes : +- 2.0	Rack travel in mm: 11.70
Check tolerance	+ Tolerance mm : + 1.30
cm3/1000s. : +- 5.0	_
	•
Spreed	
Spreed Tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
·	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 8.0	+
Tolerance cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 600
Tolerance cm3/1000 strokes : 8.0	+
Tolerance cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 600 Aneroid pressure hPa : 1000
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 600 Aneroid pressure
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 600 Aneroid pressure HPa : 1000 Del. quantity cm3/1000 strokes : 290.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cn3/1000 strokes : 5.0
Tolerance cm3/1000 strokes: 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1135 guide sleeve travel mm: 8.45	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cn3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25 Rated speed rpm : 300	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : +0.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : 4.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : 4.25	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : 4.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 303.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : 4.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752 guide sleeve guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cn3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752 guide sleeve travel mm : 752 guide sleeve travel mm : 6.09	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 303.0 tolerance degree : + 4.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : 4.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752 guide sleeve guide sleeve	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 303.0 tolerance degree : + 4.0 RATED SPEED
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752 guide sleeve travel mm : 752 guide sleeve travel mm : 6.09 Tolerance mm : + 0.25	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 303.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00
Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1135 guide sleeve travel mm : 8.45 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve travel mm : 1.33 Tolerance mm : + 0.25 Rated speed rpm : 752 guide sleeve travel mm : 752 guide sleeve travel mm : 6.09	Rated speed rpm : 600 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 303.0 tolerance degree : + 4.0 RATED SPEED

-9.90 rack travel mm 1305 Rated speed rpm Tolerance 1/min : +- 15

-13.40 rack travel mm Tolerance mm : + 0.50Rated speed rpm 1400

LOW IDLE

control lever : 267.0 position degree tolerance degree : - 4.0

Testing:

Rated speed rpm 300 rack travel mm -7.60Tolerance am : + 0.10

Rated speed rpm 200

CRT mm max. : < -5.10

360 Rated speed rom

TORQUE CONTROL

600 Rated speed rpm

1050 Rated speed rpm Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm 1000 Pressure hPa

Pressure hPa 500 Rated speed rpm -2.50rack travel mm Tolerance mm : +- 0.20

MEASUREMENT

500 Rated speed rpm

240 Pressure hPa rack travel mm -1.45

: + 0.15Tolerance mm

400 Pressure hPa -0.50rack travel mm Tolerance mm : ← 0.05

Start interlock

100 Rated speed rpm : > Rated speed rpm 230 : <

Check

speed 1/min : > 80

Check

: < speed 1/min 250

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 Rated speed rpm : 1050

Del. quantity cm3/1000 strokes : 298.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0 : +-

Aneroid pressure

500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 167.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

100 Rated speed rpm 20.25 rack travel mm Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

300 Rated speed rpm

Del. quantity cm3/1000 strokes	:	26.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	5.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 649

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1217 Governer no. : 0 421 801 782

Cust. part No. : CCEP5150A 66

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDRO62045 I-341

Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 320 Toterance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

*NW after s.o.d. : -1.45 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 12.50 Tolerance mm : ← 0.05

	+ guide sleeve
	+ travel mm : 6.00
BASIC SETTING	+ Tolerance mm : +- 0.10
Rated speed rpm : 600	Rated speed rpm : 391 guide sleeve
Del. quantity	+ travel mm : 4.37
cm3/1000 strokes : 193.0	Tolerance mm : + 0.10
Tolerance	Rated speed rpm : 490
cm3/1000 strokes : + 1.0	+ guide steeve
	+ travel mm : 6.00
Check tolerance	+ Tolerance mm : +- 0.10
cm3/1000s. : +- 4.0	+
	+ Rated speed rpm : 1340
Spreed	+ guide steeve
	† travel mm : 11.50
Tolerance	† Tolerance mm : + 0.50
cm3/1000 strokes : 5.0	+
	+
Check tolerance	+ GUIDE SLEEVE POSITION
cm3/1000s. : 9.0	+
	+
	+ control lever
	+ position degree : 109
Rated speed rpm : 275	Rated speed rpm : 600
Rack travel in mm: : -6.80	Rack travel in mm : 20.00
Tolerance mm : +- 0.10	+ Tolerance mm : +- 0.80
Del. quantity	Toterance min . To 0.00
cm3/1000 strokes : 31.0	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 2.0	I TOLL LOAD DECIVERY AT FOLL LOAD STOP
Check tolerance	Rated speed rpm : 600
cm3/1000s. : +- 5.0	+ Aneroid pressure
Spreed	1
Tolerance	+ hPa : 1000 + Del. quantity
cm3/1000 strokes : 8.0	+ cm3/1000 strokes : 193.0
Check tolerance	- Tolerance
	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : 12.0	
	Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : + 4.0 + Spreed
WITH GOVERNOR	+ Spreed - Tolerance
WEIR GOVERNOR	+ cm3/1000 strokes : 5.0
	+ Check tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000s. : 9.0
GOIDE OFFERE HWAFF	I (115) (1000).
Rated speed rpm : 1137	1
guide sleeve	
travel mm : 6.37	CONTROL LEVER
Tolerance mm : + 0.10	TOTAL CEPEN
	- control lever
Rated speed rpm : 275	+ position degree : 275.0
guide sleeve	tolerance degree : + 4.0
travel mm : 1.37	+ Total diffe degree The
Tolerance mm : +- 0.10	RATED SPEED
TO COL COLOR IN THE TOTAL COLOR	
·	± rack travel mm · −1 ΩΩ
Pated speed rom + 1050	rack travel mm : -1.00
Rated speed rpm : 1050	+ rack travel mm : -1.00 + Rated speed rpm : 1120 + Tolerance 1/min : +- 5

reck travel mm : -8.50 Rated speed rpm : 1235 : +- 15 Tolerance 1/min rack travel mm : -12.00 : +- 0.50 Tolerance mm Rated speed rpm : 1350 LOW IDLE control lever position degree : 252.0 tolerance degree : +- 4.0 Testing: Rated speed rpm 275 rack travel mm -6.80 : + 0.10Tolerance mm -10,40 rack travel mm Rated speed rpm 375 Tolerance 1/min : +- 20 200 Rated speed rpm CRT mm min. : < -5.70TORQUE CONTROL Rated speed rpm 600 Rated speed rpm : 1050 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm Pressure hPa 1000 Pressure hPa Rated speed rpm 500 rack travel mm -2.00: +- 0.20 Tolerance mm MEASUREMENT

500

Pressure hPa 320 rack travel mm : -0.85Tolerance mm : + 0.15Pressure hPa 160 rack travel mm -1.70: Tolerance mm : +- 0.05Start interlock Rated speed rpm ; > 100 Rated speed rpm : < 195 Check speed 1/min 80 : > Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS

Aneroid pressure nPa. 1000 Rated speed rpm 1050 Del. quantity cm3/1000 strokes : 198.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +--6.0 Aneroid pressure hPa

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 147.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : 15.0
Check tolerance
cm3/1000s. : 19.0

LOW IDLE

Rated speed rpm : 275

Rated speed rpm :

Del. quantity cm3/1000 strokes	•	31.0
Tolerance	•	31.0
cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.		5.0
Spreed		٥,٠
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	•	12.0
UIII 10000 1	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.04.97 Test oil : ISO 4113

Combination No. : 0 402 890 301

Injection pump

Pump designation : PE12P120A520L\$8525

EP type number : 0 412 820 203

Governor

Governer design. : RE30

Governer no. : 0 421 890 040

Cust. part No. : 51.11103-7552

Customer-spec. information

Customer : MAN

Motor : D 2842 LE 404

Power KW : 956.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 089

Inlet press. bar : 3.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.20 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.00 Tolerance mm : + 0.50

Firing order : 1A- 5-9A- 8- 3A- 4

: 11A- 10- 2A- 6 7A : 12 (A=Abschaltelem

: ent)

Phasing : 0-15-60-75-120-135

: 180-195-240-255-300

: 315

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 12

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) Uact V : 3.100 CRT mm 13.00 : +/- 0.05 Tolerance ma Check tolerance mm : +/- 0.10 Check value (P, R and H pump) Uact V 1.700 6.15 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30tolerance mm Setting point (M punip) 3.100 Uact V CRT mm 12.50 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (amuq M) 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.35 tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60
Amplitude V: 1.4
Tolerance V: +/- 0.6
Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm 1150 Uact V 3.360 Del. quantity cm3/1000 strokes : 332.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 500 Uact V 2.220 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s.9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Rated speed rpm : 500 Uact V : 1.940 Del. quantity cm3/1000 strokes : 0.1

Tolerance	
cm3/1000 strokes	: ← 0.1
Check tolerance cm3/1000s.	: +- 0.1
CIRS/ (UUUS.	· U.1
Rated speed rpm	: 500
Uact V	: 2.160
Del, quantity	. 4/5.0
cm3/1000 strokes Tolerance	: 165.0
cm3/1000 strokes	: ← 15.0
Check tolerance	
cm3/1000s.	: ← 15.0
TEST POINT L1	
1521 LOTIAL FL	
Rated speed rpm	: 300
Uact V	: 1.600
Tolerance Volt	: +- 0.060
Check tolerance Volt	: + 0.080
Del. quantity	0.000
cm3/1600 strokes	: 24.0
Tolerance	
cm3/1000 strokes Spreed	: ← 3.0
Tolerance	
cm3/1000 strokes	: 3.0
Check tolerance	
	: 3.0 : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 25.04.97 Test oil : ISO 4113

Combination No. : 0 402 946 031

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 032

Governor

Governer design. : RQ250/1000PA1265-2

Governer no. : 0 421 801 822

Cust. part No. : 1385102

Customer-spec. information

Customer : SCANIA : DSC 9.15 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance "C : -- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestrake and : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: +- 0.50

Start of delivery blocking

Tolerance : +- 0.30

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 12.70

Tolerance mm : + 0.05	- guide sleeve
4	travel mm : 3.50
Del. quantity	Tolerance mm : + 0.10
cm3/1000 strokes : 300.0	
CHIST 1000 SETORCS 1. SOULD	Rated speed rpm : 540
Tolongo	
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0 -	travel mm : 4.50
•	Tolerance mm : +- 0.10
Check tolerance	
cm3/1000s. : +- 9.0	Rated speed rpm : 1680
	- guide sleeve
Spreed	travel mm : 11.50
	Tolerance mm : + 0.50
Tolerance	i toterance min . += 0.50
cm3/1000 strokes : 8.0	
cms/ludd strokes : 0.0	CUITAR OF COMMENCE AND COMMENCE
	GUIDE SLEEVE POSITION
Check tolerance -	-
cm3/1 000 s. : 12.0	Rated speed rpm : 1522
	Rack travel in mm : 11.70
	- Tolerance mm : +- 1.30
Rated speed rpm : 250	
Traces opecs (pin) 250	
Rack travel in mm : 5.10	FULL LOAD DELIVERY AT FULL LOAD STOP
	F FOLL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : +- 0.10	
Del. quantity	- Rated speed rpm : 600
cm3/1000 strokes : 40.0 -	- Aneroid pressure
Tolerance	hPa : 1500
cm3/1000 strokes : + 3.0	- Del. quantity
Check tolerance	cm3/1000 strokes : 300.0
cm3/1000s. : +- 6.0	F Tolerance
Spreed	cm3/1000 strokes : + 1.0
Tolerance	Check tolerance
cm3/1000 strokes : 4.0	- cm3/1000s. : +- 9.0
Check tolerance	- Spreed
cm3/1 000 s. : 8.0	Tolerance
	- cm3/1000 strokes : 8.0
	- Check tolerance
(D) CETTING OF INJECTION DUMD	
(B) SETTING OF INJECTION PUMP	- cm3/1090s. : 12.0
WITH GOVERNOR	
†	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
-	-
Rated speed rpm : 1076	- control lever
guide sleeve	position degree : 42.0
travel mm : 4.72	tolerance degree : + 4.0
Tolerance mm : + 0.15	total and degree . 4.0
Toterative min	control lever
D. 4 . 1	· - · · · · ·
Rated speed rpm : 250 -	position degree : 106.0
guide sleeve	- tolerance degree : + 4.0
travel mm : 1.25	
Tolerance mm : + 0.20	RATED SPEED
	rack travel mm : 11.70
Rated speed rpm : 1000	Rated speed rpm : 1045
guide sleeve	
travel mm : 4.50	Check
Tolerance mm : +- 0.10	speed 1/min : + 10
-	-
Rated speed rpm : 418	rack travel mm : 4.00
The second secon	,

Rated speed rpm	: 1200	+ Pressure hPa : -
Tolerance 1/min		Rated speed rpm : 500
Check	• 15	
speed 1/min		
speed (/min	: +- 20	Tolerance mm : +- 0.20
	0.50	†
rack travel mm	: 0.50	+ MEASUREMENT
Tolerance mm	: +- 0.50	†
Rated speed rpm	: 1350	+ Rated speed rpm : 500
		+
		+ Pressure hPa : 350
		+ rack travel mm : 11.75
		+ Tolerance mm : + 0.15
LOW IDLE		}
		+ Pressure hPa : 550
		+ rack travel mm : 12.40
control lever		+ Tolerance mm : + 0.05
position degree	: 27.0	
tolerance degree		+ Start interlock
toter arite degree	1 . 4.0	T Start filter tock
control lever		\mathbf{I}
position degree	: 23.0	T
		FUEL DELTUEDY QUADACTEDIOTICS
tolerance degree	: ← 4.0	+ FUEL DELIVERY CHARACTERISTICS
		†
Testing:		+ Aneroid pressure
		+ hPa : 1500
Rated speed rpm		+ Rated speed rpm : 1000
rack travel mm	: 5.10	+ Del. quantity
Tolerance ma	: +- G.10	$\frac{1}{7}$ cm3/1000 strokes : 290.0
		† Tolerance
rack travel mm	: 2.00	+ cm3/1000 strokes : $+$ 4.0
Rated speed rpm	: 350	+ Check tolerance
Tolerance 1/min		+ cm3/1000s. : + 9.0
Rated speed rpm	: 200	Aneroid pressure
		+ hPa : -
CRT mm min.	: > 8.00	Rated speed rpm : 500
	. , 0.00	Del. quantity
		cm3/1000 strokes : 172.0
TORQUE CONTROL		Tolerance
TORGOE CONTINUE		- cm3/1000 strokes : +- 1.0
Datad assad see	: 600	+ Check tolerance
Rated speed rpm		(: : : : : : : : : : : : : : : : : : :
rack travel mm		+ cm3/1000s. : + 6.0
Tolerance mm	: ← 0.05	†
Ontard 11 1 2 1	. 4000	Ť
Rated speed rpm	: 1000	OTABETANO SUEL ASSISTA
rack travel mm		+ STARTING FUEL DELIVERY
Tolerance mm	: ← 0.05	†
		+ Del. quantity
		+ cm3/1000 strokes : 270.0
ANEROID/ALTITUDE		+ Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 20.0
		+ Check tolerance
		+ cm3/1000s. : +- 24.0
SETTING		+
		+
Rated speed rpm	: 500	+
Pressure hPa	: 1500	
rack travel mm	: 12.70	LOW IDLE
Tolerance mm	: +- 0.05	
, 4 = 4, 41 (V) (IB))	2.05	Rated speed rpm : 250
		I nacca opeca i piii . 250

Del. quantity cm3/1000 strokes	:	40.0
Tolerance cm3/1000 strokes		3.0
Check tolerance	•	
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes		4.0
Check tolerance	•	
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition

: 29.04.97

Test oil : ISO 4113

Combination No. : U 403 436 104

Injection pump

Pump designation : PES6MW100/120RS1143

EP type number : 0 413 406 137

Governor

Governer design. : RQV350...1200MW82-1

Governer no. : 0 420 083 153

Cust. part No.

Customer-spec. information

Customer : CUMPINS
Motor : 6 CTA-830

Power KW : 179.0

rower kw : 1/9.u

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40

Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 017

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm : 3.20

Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 10.00

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 12.45
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 1.0

		I
Check tolerance cm3/1000s.	: +- 3.0	+
Spreed		‡
		1
Tolerance		+
cm3/1000 strokes	: 3.5	+
_		+
Check tolerance		†
cm3/1000s.	: 6.0	†
		I
		1
Rated speed rpm	: 350	+
	7.50	+
Rack travel in mm	: 7.50 : +- 0.10	†
Tolerance mm Del. quantity	: 0.10	Ī
cm3/1000 strokes	: 16.0	I
Tolerance		+
cm3/1000 strokes	: +- 2.0	+
Check tolerance		+
cm3/1000s.	: +- 4.5	+
Spreed Tolorense		†
Tolerance cm3/1000 strokes	: 3.5	İ
	• 3.7	T
Check tolerance		1
Check tolerance cm3/1000s. (B) SETTING OF IN	: 5.5 JECTION PUMP	+++++
cm3/1000s.		+++++++
cm3/1000s. (B) SETTING OF IN.	JECTION PUMP	++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAV	JECTION PUMP	+++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR	JECTION PUMP	+++++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm	JECTION PUMP EL : 800 : 5.20	++++++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve	JECTION PUMP EL : 800	+++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVIOR Rated speed rpm guide sleeve travel mm Tolerance mm	JECTION PUMP EL : 800 : 5.20 : ← 0.30	+++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVIOR Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	JECTION PUMP EL : 800 : 5.20	+++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVIOR Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	JECTION PUMP EL : 800 : 5.20 : ← 0.30	++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVIOR Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	JECTION PUMP EL : 800 : 5.20 : → 0.30 : 1250	++++++++++++++++
cm3/1000s. (B) SETTING OF INCOMITH GOVERNOR GUIDE SLEEVE TRAVIOR Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	JECTION PUMP EL : 800 : 5.20 : ← 0.30 : 1250 : 7.70 : ← 0.10	++++++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	JECTION PUMP EL : 800 : 5.20 : ← 0.30 : 1250 : 7.70 : ← 0.10	+++++++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	JECTION PUMP EL : 800 : 5.20 : → 0.30 : 1250 : 7.70 : → 0.10 : 1350	+++++++++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	JECTION PUMP EL : 800 : 5.20 : → 0.30 : 1250 : 7.70 : → 0.10 : 1350 : 8.80	++++++++++++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	JECTION PUMP EL : 800 : 5.20 : → 0.30 : 1250 : 7.70 : → 0.10 : 1350	++++++++++++++++++++++
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	EL : 800 : 5.20 : → 0.30 : 1250 : 7.70 : → 0.10 : 1350 : 8.80 : ← 0.20	+++++++++++++++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	EL : 800 : 5.20 : → 0.30 : 1250 : ↑ 7.70 : → 0.10 : 1350 : ★ 8.80 : ← 0.20 : 350	+++++++++++++++++++++++++++++++++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	JECTION PUMP EL : 800 : 5.20 : + 0.30 : 1250 : 7.70 : + 0.10 : 1350 : 8.80 : + 0.20 : 350 : 1.40	+++++++++++++++++++++++++++++++++++++++
cm3/1000s. (B) SETTING OF IN. WITH GOVERNOR GUIDE SLEEVE TRAVI Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	EL : 800 : 5.20 : → 0.30 : 1250 : ↑ 7.70 : → 0.10 : 1350 : ★ 8.80 : ← 0.20 : 350	+++++++++++++++++++++++++++++++++++++++

Rated speed rpm Aneroid pressure	: 1200
hPa	: 700
Del. quantity cm3/1000 strokes	: 145.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 3.0
Spreed Tolerance	
cm3/1000 strokes	: 3.5
Check tolerance cm3/1000S.	: 6.0
CONTROL LEVER	
control lever position degree	: 104.0
tolerance degree	: +- 4.0
RATED SPEED	. 14 /0
rack travel mm Rated speed rpm	: 11.40 : 1255
Tolerance 1/min	: ← 5
rack travel mm Rated speed rpm	: 4.00 : 1390
Tolerance 1/min	: +- 15
rack travel mm Tolerance mm	: 0.50 : + 0.50
Rated speed rpm	: 1500
LOW IDLE	
control lever position degree	: 70.0
tolerance degree	: +- 4.0
Testing:	
Rated speed rpm rack travel mm	: 350 : 7.50
Tolerance mm	: 7.50 : +- 0.10
Rated speed rpm	: 200
CRT mm min.	: > 9.50
Rated speed rpm	: 430
TORQUE CONTROL	

		± //noroid nroccure
Rated speed rpm	: 1200	+ Aneroid pressure + hPa : 700
rack travel mm	: 12.45	1
=		
Tolerance mm	; +- 0.05	t Del. quantity
Dak daranda	350	+ cm3/1000 strokes : 144.5
Rated speed rpm		† Tolerance
rack travel mm		+ cm3/1000 strokes : +- 1.5
Tolerance mm	: +- 0.05	+ Check tolerance
		+ cm3/1000s. : + 4.0
Rated speed rpm		+ Spreed
rack travel mm		† Tolerance
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : 5.0
		+ Check tolerance
Rated speed rpm	: 900	+ cm3/1000s. : 7.0
rack travel mm		+
Tolerance mm	: +- 0.10	+ Aneroid pressure
		hPa : -
		- + Rated speed rpm : 500
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		- cm3/1000 strokes : 94.0
COLL SHOWLOW LEGI		+ Tolerance
		- cm3/1000 strokes : - 1.0
CETTAIC		+ Check tolerance
SETTING		+ cm3/1000s. : +- 3.0
Detail aread are	. F00	† tilis/10003. : † 3.0
Rated speed rpm		<u>†</u>
Pressure hPa	: -	†
rack travel mm	: 10.85	
Tolerance mm	: 0.0 5	+ STARTING FUEL DELIVERY
	700	†
Pressure hPa	: 390	+ Rated speed rpm : 100
Rated speed rpm		+ rack travel mm : 20.00
rack travel mm	: 11.30	+ Tolerance mm : + 1.00
Tolerance mm	: +- 0.05	- del. quantity
		├ cm3/1000 strokes : 220.0
MEASUREMENT		† Tolerance
		+ cm3/1000 strokes : +- 10.0
Rated speed rpm	500	+ Check tolerance
·	: 500	T check totalite
	: 500	- cm3/1000s. : - 13.0
Pressure hPa	: 700	
Pressure hPa rack travel mm	: 700	
rack travel mm	: 700 : 12.75	
	: 700 : 12.75	
rack travel mm Tolerance mm	: 700 : 12.75 : + 0.10	cm3/1000s. : ← 13.0
rack travel mm Tolerance mm Pressure hPa	: 700 : 12.75 : ← 0.10 : 500	
rack travel mm Tolerance mm Pressure hPa rack travel mm	: 700 : 12.75 : ← 0.10 : 500 : 12.20	cm3/1000s. : ← 13.0 LOW IDLE
rack travel mm Tolerance mm Pressure hPa	: 700 : 12.75 : ← 0.10 : 500	cm3/1000s. : ← 13.0
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 700 : 12.75 : ← 0.10 : 500 : 12.20	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity
rack travel mm Tolerance mm Pressure hPa rack travel mm	: 700 : 12.75 : ← 0.10 : 500 : 12.20	cm3/1000s. : - 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 700 : 12.75 : + 0.10 : 500 : 12.20 : + 0.15	cm3/1000s. : - 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15	cm3/1000s. : - 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15	cm3/1000s. : \(\dagger \) 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : \(\dagger \) 2.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : ← 2.0 Check tolerance cm3/1000s. : ← 4.5
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15 : > 100 : < 220	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : ← 2.0 Check tolerance cm3/1000s. : ← 4.5 Spreed
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min Check	: 700 : 12.75 : + 0.10 : 500 : 12.20 : + 0.15 : > 100 : < 220	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min	: 700 : 12.75 : ← 0.10 : 500 : 12.20 : ← 0.15 : > 100 : < 220	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min Check	: 700 : 12.75 : + 0.10 : 500 : 12.20 : + 0.15 : > 100 : < 220	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min Check speed 1/min	: 700 : 12.75 : + 0.10 : 500 : 12.20 : + 0.15 : > 100 : < 220 : > 80 : < 240	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Check speed 1/min Check	: 700 : 12.75 : + 0.10 : 500 : 12.20 : + 0.15 : > 100 : < 220 : > 80 : < 240	cm3/1000s. : ← 13.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.07.95 Edition Test oil : ISO 4113

: 0 460 424 063 Part no. Pump designation: VE4/12F1150R374-1

Customer-spec, information

Customer : CDC

: 4 BTA 3.9 IND. Motor

TEST BENCH REQUIREMENTS

Calibrating oil

return

temperature °C : 45 Tolerance °C + :

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar +-: 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 bar Tolerance bar + : 3

Test Lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Tolerance mm +: 0.02(0.06)

Outlet : A

Prestroke

(as of UT) mm : 0.3Tolerance mm + : 0.02

Check

tolerance mm +: 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 850

Aneroid pressure

hPa 1000

Setting mm 4.2 0.2 Tolerance mm +:

Shutoff solenoid

12 Volt

SUPPLY PUMP PRESSURE

Rated speed rpm : 850

Aneroid pressure

1000 hPa

Supply pomp

5.9 pressure bar Tolerance bar +-: 0.3

Shutcff solenoid

12 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 850

Aneroid pressure

1000

Del. quantity

cm3/1000 strokes : 89.8

Tolerance

cm3/1000 str. +-:0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

12 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 63.4

Tolerance

cm3/1000 str. + :0.5

Shutoff solenoid

Volt 12

Check tolerance cm3/1000s. :	4,5	1	Rated speed rpm Aneroid pressure	: 500
IDLE SETTING	71.5	1	hPa	: 1000
		\downarrow	SV travel mm	: 2.2
Rated speed rpm : Del. quantity	375	İ	Tolerance mm + Check	
cm3/1000 strokes : Tolerance	11.0	1	tolerance mm +- Shutoff solenoid	: 0.7
cm3/1000 str. +: Shutoff solenoid	3.0	1		: 12
Volt :	12	-	SUPPLY PUMP PRESSU	RE CHARACTERISTIC
cm3/1000 strokes : Check tolerance	5.5	$\frac{1}{1}$	Rated speed rpm Aneroid pressure	: 1150
cm3/1000s.	7.0	1	hea Supply pomp	: 1000
		T	pressure bar	: 7.2
		Ţ	Tolerance bar +-	
		T	Shutoff solenoid	. 0.5
FULL-LOAD SPEED REGL	JLATION	Ŧ		: 12
Rated speed rpm : Pressure hPa :	1220 1000	** ************	Rated speed rpm Aneroid pressure	: 500
Del. quantity cm3/1000 strokes :	44.0	$\frac{1}{2}$	hPa Supply pomp	: 1000
Tolerance	4110	1	pressure bar	: 4.3
cm3/1000 str. + :	3.0	1	Tolerance bar +	
Shutoff solenoid	3.0	I	Shutoff solenoid	. 0.5
Volt :	12	1	Volt	: 12
STARTING FUEL DELIVE	RY	‡	OVERFLOW QUANTITY	
Rated speed rpm : Del. quantity	100	‡	Rated speed rpm Aneroid pressure	: 1150
cm3/1000 strokes : Tolerance	95.0	‡	hPa Overflow quantity	: 1000
cm3/1600 str. +-: Shutoff solenoid	35.0	‡	ccm/10s Tolerance	: 97.2
Volt :	12	‡	ccm/10s +-	: 41.6
		<u>†</u>	Check tolerance ccm/10s +- Shutoff solenoid	: 416
INJECTION-PUMP TEST	SPECIFICAT	IONS	Volt	: 12
TIMING DEVICE CHARAC	TERISTIC		Rated speed rpm Overflow quantity	: 500
Rated speed rpm :	1150	1	ccm/10s Tolerance	: 63.8
Aneroid pressure hPa :	1000	‡	ccm/10s +-	: 22.2
SV travel mm :	5.6	‡	Check tolerance ccm/10s +	: 22.2
Tolerance mm + :	0.4	1	Shutoff solenoid Volt	: 12
tolerance mm +:	0.7	1		- 16
Shutoff solenoid Volt :	12	‡	DELIVERY AND BREAK	AWAY CHARACTERISTIC
•	. —	1	Rated speed rpm	: 1220

Aneroid pressure hPa :	1000	<pre>pel. quantity cm3/1000 strokes :</pre>	84.5
Del. quantity cm3/1000 strokes :	44.0	+ Tolerance + cm3/1000 str. +-:	1.5
Tolerance cm3/1000 str. +-:	3.0	Check tolerance cm3/1000s. +-:	3.5
Check tolerance cm3/1000S. +-: Shutoff solenoid	6.0	- Shutoff solenoid - Volt :	12
Volt :	12	Rated speed rpm : Aneroid pressure	500
Rated speed rpm : Aneroid pressure	1245	hPa : Del. quantity	1000
hPa : Del. quantity	1000	cm3/1000 strokes : Tolerance	98.5
cm3/1000 strokes : Check tolerance	25.0	- cm3/1000 str. +-: - Shutoff solenoid	4.0
cm3/1000s. +-: Shutoff solenoid	20.0	+ Volt :	12
Volt :	12 1280	Rated speed rpm : Aneroid pressure hPa :	850 1090
Aneroid pressure	1000	Del. quantity cm3/1000 strokes :	89.8
Del. quantity cm3/1000 strokes :	1,5	Tolerance cm3/1000 str. +-:	0.5
Tolerance cm3/1000 str. +-:	1.5	Check tolerance cm3/1000s. +-:	3.0
Check tolerance cm3/1000s. +:	1.5	+ Shutoff solenoid + Volt :	12
Shutoff solenoid		†	
Volt :	12	MECHANICAL SHUTOSE	
Rated speed rpm :	12 7 00	MECHANICAL SHUTOFF Rated speed rpm :	1150
Rated speed rpm : Aneroid pressure hPa :		MECHANICAL SHUTOFF Rated speed rpm : Aneroid pressure hPa :	1150 1000
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance	700 350 82.4	Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes :	
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance	700 350 82.4 0.5	Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-:	1000
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	700 350 82.4 0.5 4.0	Rated speed rpm : Aneroid pressure HPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Spread cm3/1000 strokes :	1000 1.5
Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt:	700 350 82.4 0.5 4.0	Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +: Spread cm3/1000 strokes : Check tolerance cm3/1000s. +:	1000 1.5 1.5
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	700 350 82.4 0.5 4.0	Rated speed rpm : Aneroid pressure HPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Spread cm3/1000 strokes : Check tolerance	1000 1.5 1.5 5.0
Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt: Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes:	700 350 82.4 0.5 4.0 12	Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Spread cm3/1000 strokes: Check tolerance cm3/1000s. +: Spread cm3/1000s. +:	1000 1.5 1.5 5.0 1.5
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-:	700 350 82.4 0.5 4.0 12 1150 1000	Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Spread cm3/1000 strokes: Check tolerance cm3/1000s. +: Spread cm3/1000 strokes: Shutoff solenoid Volt: ELECTR. SHUTOFF	1000 1.5 1.5 5.0 1.5 5.0
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-:	700 350 82.4 0.5 4.0 12 1150 1000 81.3	Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes : Spread cm3/1000 strokes : Check tolerance cm3/1000s. +: Spread cm3/1000 strokes : Spread cm3/1000 strokes : LECTR. SHUTOFF CONTROL LEVER, IDLE	1000 1.5 1.5 5.0 1.5 5.0 12
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance	700 350 82.4 0.5 4.0 12 1150 1000 81.3 1.5	Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Spread cm3/1000 strokes: Check tolerance cm3/1000s. +: Spread cm3/1000 strokes: Spread cm3/1000 strokes: Spread cm3/1000 strokes: Shutoff solenoid Volt: ELECTR. SHUTOFF CONTROL LEVER, IDLE: Rated speed rpm: Del. quantity	1000 1.5 1.5 5.0 1.5 5.0 12
Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	700 350 82.4 0.5 4.0 12 1150 1000 81.3 1.5 3.0	Rated speed rpm: Aneroid pressure hPa: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 strokes: Spread cm3/1000 strokes: Check tolerance cm3/1000s. +: Spread cm3/1000 strokes: Spread cm3/1000 strokes: Spread cm3/1000 strokes: Shutoff solenoid Volt: ELECTR. SHUTOFF CONTROL LEVER, IDLE: Rated speed rpm:	1000 1.5 1.5 5.0 1.5 5.0 12

Check tolerance cm3/1000s. 1.5 Spread cm3/1000 strokes : 5.0 FULL-LOAD STOP CONTROL LEVER 375 Rated speed rpm Del. quantity cm3/1000 strokes : 1.5 Tolerance $cm3/1000 str. \leftarrow :$ 1.5 Spread cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 1.5 Spread cm3/1000 strokes : 5.0 IDLE DELIVERY Rated speed rpm : 450 Del. quantity cm3/1000 strokes : 2.0 Tolerance cm3/1000 str. \leftarrow : 2.0 Check tolerance cm3/1000s. +-: 2.0 Shutoff solenoid 12 Volt START TRANSITION 230 Rated speed rpm : Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 str. +-:20.0 Shutoff solenoid 12 Volt 130 Rated speed rpm : Del. quantity cm3/1000 strokes : 95.0 Tolerance 35.0 cm3/1000 str. +-: Shutoff solenoid 12 Volt ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension MS mm : 1,2 Tolerance mm + : 0,2 SVS dimension mm : 2,5

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 41,8..47,6

End of test-specification sheet

Dimension KF mm : 5,2 Tolerance mm + : 0,2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16,10,95 Edition Test oil : ISO 4113

: 0 460 426 256 Part no. Pump designation: VE6/12F1250R498-8

Customer-spec. information Customer : CDC

Motor : 6 BTAA 5.9B

TEST BENCH REQUIREMENTS

Calibrating-oil return

temperature °C Tolerance °C

Overflow

restriction mm 0.55

0.35 Inlet press. bar : Tolerance bar +-: 0.05

Test nozzle holde

: 1 688 901 109 assembly

Opening pressure

207 bar Tolerance bar +-:

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 840 x length mm :

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,4

Tolerance mm \div : 0,02(0,06)

Outlet | : D

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 1000

Aneroid pressure

hPa 1000 :

1.7 Setting mm Tolerance mm 0.2

Shutoff solenoid

12 Volt

SUPPLY PUMP PRESSURE

Rated speed rpm 1000

Aneroid pressure

hPa 1000

Supply pomp

pressure bar 6.6 Tolerance bar +-: 0.3

Shutoff solenoid

Volt 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 850

Aneroid pressure

1000 hPa

Del. quantity

cm3/1000 strokes : 84.5

Tolerance

cm3/1000 str. +: 0.5

Spread

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 5.0

Shutoff solenoid

12 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 71.0

Tolerance

cm3/1000 str. +:0.5

Spread

cm3/1000 strokes : 5.0

Shutoff solenoid

12 Volt :

Check tolerance

cm3/1000s. 6.0

Check tolerance

cm3/1000s. 5.0 :

		+ Aneroid pressure	
IDLE SETTING		+ hPa	: 1000
Rated speed rpm	: 350	+ Shutoff solenoid + Volt	: 12
Del. quantity cm3/1000 strokes	: 8.0	+ Rated speed rpm	: 450
Tolerance cm3/1000 str. +-	: 2.0	+ SV travel mm	: 2.4
Shutoff solenoid Volt	: 12	+ Tolerance mm +- + Check	: 0.5
Spread cm3/1000 strokes	: 5.5	tolerance mm + Shutoff solenoid	: 0.7
Check tolerance cm3/1000s.	: 7.0	Volt	: 12
tiio/10003.	. 7.0	KSB/AFB Volt	: 12
		Rated speed rpm Aneroid pressure	: 850
FULL-LOAD SPEED RE	EGULATION	hPa hPa	: 1000
Rated speed rpm	: 1380	I SV travel mm	: 0.7
Pressure hPa	: 1000	+ Tolerance man +	: 0.4
Del. quantity		Check	
cm3/1000 strokes Tolerance	: 60.5	tolerance mm +- Shutoff solenoid	: 0.7
cm3/1000 str. +- Shutoff solenoid	: 3.0	Volt	: 12
Volt	: 12	SUPPLY PUMP PRESSU	RE CHARACTERISTIC
STARTING FUEL DEL	IVERY	Rated speed rpm Aneroid pressure	: 1250
Rated speed rpm	: 100	+ hPa	: 1000
Del. quantity cm3/1000 strokes	: 85.0	+ Supply pomp	. 7.4
Tolerance	: 65.0	+ pressure bar + Tolerance bar +-	: 7.6 : 0.3
cm3/1000 str. +	: 15.0	+ Shutoff solenoid	. 0.3
Shutoff solenoid		Volt	: 12
Volt	: 12	+ + Rated speed rpm	: 850
		+ Aneroid pressure	
		+ hPa	: 1000
		+ Supply pomp	. (3
INJECTION-PUMP TE	ET EDECTETCATIONS	+ pressure bar - Tolerance bar +-	: 6.2 : 0.3
TRUECITOR FOMP IE	21 SPECIFICATIONS	+ Shutoff solenoid	. 0.5
TIMING DEVICE CHAP	RACTERISTIC	Volt	: 12
Rated speed rpm	: 1250	The second secon	: 500
Aneroid pressure	: 1000	+ Aneroid pressure + hPa	: 1000
hPa	: 1000	Supply pomp	: 1000
SV travel mm	: 2.4	+ pressure bar	: 4.4
Tolerance mm +-	0.4	+ Tolerance bar +-	
Check	• • •	+ Shutoff solenoid	. 5,5
tolerance mm +-	: 0.7	Volt	: 12
Shutoff solenoid Volt	: 12	OVERFLOW QUANTITY	
Rated speed rpm	: 500	Rated speed rpm	: 500

Overflow quantity		+	Aneroid pressure		
ccm/10s : Tolerance	63.8	<u> </u>	hPa Del. quantity	: 450	
ccm/10s +:	22.2	1	cm3/1000 strokes Tolerance	: 79.5	
Check tolerance ccm/10s +-:	22. 2	1	cm3/1000 str. +-:	: 0.5	
Shutoff solenoid Volt	12	1	cm3/1000s. + :	: 4.0	
Rated speed rpm :	1250	+	Volt	: 12	
Aneroid pressure	1000	Ŧ	Rated speed rpm Aneroid pressure	: 1250	
Overflow quantity ccm/10s :	77.7	Ŧ	hPa Del. quantity	: 1000	
Tolerance ccm/10s →:		Ţ	cm3/1000 strokes	: 84.Ū	
Check tolerance	61.1	Ŧ	cm3/1000 str. + Check tolerance	: 1.5	
ccm/10s +: Shutoff solenoid	27.7	Ŧ	cm3/1000s. +- Shutoff solenoid	: 3.0	
Volt :	12	Ī	Volt	: 12	
DELIVERY AND BREAKA	WAY CHARACTERISTIC	Ŧ	Rated speed rpm Aneroid pressure	: 500	
Rated speed rpm : Aneroid pressure	1380	Ŧ	hPa Del. quantity	: 1000	
hPa : Del. quantity	1000	Ī		97.0	
cm3/1000 strokes : Tolerance	60.5	Ŧ	cm3/1000 str. +-: Shutoff solenoid	: 5.0	
cm3/1000 str. + : Check tolerance	3.0	<u> </u>		: 12	
cm3/1000s. +-: Shutoff solenoid	6.0	Ī	Rated speed rpm Aneroid pressure	: 850	
Volt :	12	1	hPa Del. quantity	: 1000	
Rated speed rpm : Aneroid pressure	1465	1		: 84.5	
hPa : Del. quantity	1000	1	cm3/1000 str. +-:	: 0.5	
cm3/1000 strokes : Check tolerance	22.0	1	cm3/1000s. + Shutoff solenoid	: 3.0	
cm3/1000s. Shutoff solenoid	10.0	1	Volt	: 12	
Volt :	12	+	MECHANICAL SHUTOFF		
Rated speed rpm : Aneroid pressure	1510	1	Rated speed rpm		
hPa : Del. quantity	1000	<u> </u>	Aneroid pressure	: 1000	
cm3/1000 strokes : Tolerance	1.5	<u></u>	Del. quantity cm3/1000 strokes		
cm3/1000 str. ← : Check tolerance	1.5	<u> </u>	Tolerance cm3/1000 str. +-		
cm3/1000s. +-: Shutoff solenoid	1.5	‡	Check tolerance cm3/1000s. +-		
Volt :	12	‡	Shutoff solenoid Volt	: 12	
Rated speed rpm :	600	+	-		

ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP

Rated speed rpm Del. quantity	:	350
cm3/1000 strokes	:	1.5
Tolerance cm3/1000 str. +-	:	1.5
Check tolerance cm3/1000s. +	:	1.5

FULL-LOAD STOP CONTROL LEVER

Rated speed rpm	:	350
Del. quantity cm3/1000 strokes	:	1.5
Tolerance cm3/1000 str. +-	:	1.5
Check tolerance cm3/1000s. +-	:	1.5

IDLE DELIVERY

Rated speed rpm Del. quantity	:	410
cm3/1000 strokes	:	1.5
Tolerance cm3/1000 str. +-	:	1.5
Check tolerance cm3/1000s. +-	:	1.5
Shutoff solenoid Volt	:	12

START TRANSITION

Rated speed rpm Del. quantity cm3/1000 strokes	:	240 80. 0
Tolerance cm3/1000 str. +- Shutoff solenoid	:	15.0
Volt	:	12
Rated speed rpm	:	130
Del. quantity cm3/1000 strokes	:	130 95.0
Del. quantity	:	

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension K mm	:	3,7
Tolerance mm +		0,1
Dimension KF mm	:	6,4
Tolerance mm +	:	0,2
MS1 dimension mm	:	1,3
Tolerance mm +	:	0,2

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.08.95 Test oil : ISO 4113

Part no. : 0 460 424 105 Pump designation : VE4/12F1150R587

Customer—spec. information Customer : MAN

Motor : D 0824 LUE 521

Power KW : 103.0

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C : 45 Tolerance °C +-: 1

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35
Tolerance bar +-: 0.05

Test nozzle holde

assembly : 1 688 901 110

Opening pressure

bar : 250 Tolerance bar + : 3

Test Lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter: 2.00 x length mm : 840

REMARKS

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 850

Aneroid pressure

hPa : 1000

Setting mm : 2.4
Tolerance mm + : 0.2

Shutoff solenoid

Volt : 12

SUPPLY PUMP PRESSURE

Rated speed rpm : 850

Aneroid pressure

hPa : 1000

Supply pomp

pressure bar : 6.7
Tolerance bar +: 0.3

Tolerance bar +: 0.3
Shutoff solenoid

Volt : 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 800

Aneroid pressure

hPa : 1000

Del. quantity

cm3/1000 strokes : 116.0

Tolerance

cm3/1000 str. + : 0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 4.5

Shutoff solenoid

Volt : 12

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 450

Del. quantity

cm3/1000 strokes : 63.0

Tolerance

cm3/1000 str. + : 0.5

Shutoff solenoid

Volt : 12

Check tolerance

cm3/1000s. : 4.5

IDLE SETTING

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 str. + : 2.0

Shutoff solenoid

Volt : 12

A							
Spread cm3/1000 strokes	:	ó . 0	‡	Rated speed rpm	:	1150	
Check tolerance	•		+	Aneroid pressure	•	1150	
cm3/1000s.	:	6.5	+	hPa	:	1000	
			t	Supply pomp		8.0	
			Ī	pressure bar Tolerance bar +-	•	0.3	
			1	Shutoff solenoid	•	0. 5	
FULL-LOAD SPEED R	EGULA	ATION	+	Volt	:	12	
Rated speed rpm		1225	1	Rated speed rpm	:	500	
Pressure hPa	:	1000	I	Aneroid pressure	•	J00	
Del. quantity	-		+	hPa	:	1000	
cm3/1000 strokes	:	70.0	+	Supply pomp			
Tolerance cm3/1000 str. +-		3.0	†	pressure bar Tolerance bar +-	:	5.2 0. 3	
Shutofr solenoid	•	3.0	I	Shutoff solenoid	•	U.5	
Volt	:	12	+	Volt	:	12	
CTABTILE FUEL NEL	TUEN	,	†	AVERELANDA ANALTYTY			
STARTING FUEL DEL	TAEKI	ı	‡	OVERFLOW QUANTITY			
Rated speed rpm	G •	100	+	Rated speed rpm	:	450	
Del. quantity		430.0	†	Overflow quantity		47.0	
cm3/1000 strokes Tolerance	•	120.0	<u>†</u>	ccm/10s Tolerance	•	63.8	
cm3/1000 str. +		30.0	Ţ	ccm/10s +-	:	22.2	
Shutoff solenoid			+				
Volt	•	12	†	Check tolerance		22.2	
			Ť	ccm/10s +	•	22.2	
			1	Shirtoff colenoid			
			‡	Shutoff solenoid Volt	:	12	
			‡	Volt	:	12	
TALLECTY ON LOUIS TE	27 20	DECTETCATIONS	- ‡	Volt Rated speed rpm	:	12 11 2 5	
INJECTION-PUMP TE	ST SF	PECIFICATIONS	- +	Volt Rated speed rpm Aneroid pressure		1125	
INJECTION-PUMP TE			- + + + +	Volt Rated speed rpm	:		
TIMING DEVICE CHÂ	RACTE	ERISTIC	+ + + + + +	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s	:	1125	
TIMING DEVICE CHA			- + + + + +	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance	•	1125 1 00 0 97.2	
TIMING DEVICE CHA Rated speed rpm Aneroid pressure	RACTE	ERISTIC 1150	+ + + + + + + + +	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s	•	1125 1000	
TIMING DEVICE CHA	RACTE	1150 1000	- + + + + + + + + + + + + + + + + + + +	Volt Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s Check tolerance	•	1125 1000 97.2 41.6	
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm	RACTE	1150 1000 3.3	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s + Check tolerance ccm/10s +	•	1125 1 00 0 97.2	
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +	RACTE	1150 1000	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid	•	1125 1000 97.2 41.6	
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck	RACTE	1150 1000 3.3 0.4	_	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s + Check tolerance ccm/10s +	•	1125 1000 97.2 41.6	
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +- Cneck tolerance mm +- Shutoff solenoid	RACTE	1150 1000 3.3 0.4 0.7	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid	•	1125 1000 97.2 41.6 41.6	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm +	RACTE	1150 1000 3.3 0.4	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA	: :	1125 1000 97.2 41.6 41.6 12	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +- Cneck tolerance mm +- Shutoff solenoid Volt	RACTE	1150 1000 3.3 0.4 0.7	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREAR	•	1125 1000 97.2 41.6 41.6	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +- Cneck tolerance mm +- Shutoff solenoid Volt Rated speed rpm	RACTE	1150 1000 3.3 0.4 0.7	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA	: :	1125 1000 97.2 41.6 41.6 12 12 CHARACTERIS	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +- Cneck tolerance mm +- Shutoff solenoid Volt	RACTE	1150 1000 3.3 0.4 0.7	_	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity	: : : : KAWA	1125 1000 97.2 41.6 41.6 12 12 1225 1000	STIC
Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: : : : KAWA	1125 1000 97.2 41.6 41.6 12 12 CHARACTERIS	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa SV travel mm	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000 1.2	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	KAWA	1125 1000 97.2 41.6 41.6 12 1225 1000 70.0	STIC
Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000	_	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	KAWA	1125 1000 97.2 41.6 41.6 12 12 1225 1000	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Check tolerance mm +	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000 1.2	+++++++++++++++++++++++++++++++++++++	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-	KAWA	1125 1000 97.2 41.6 41.6 12 1225 1000 70.0	STIC
Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Check tolerance mm + Shutoff solenoid	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000 1.2 0.4 0.7		Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid	KAWA	1125 1000 97.2 41.6 41.6 12 1225 1000 70.0 3.0 8.5	STIC
TIMING DEVICE CHA Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Cneck tolerance mm + Shutoff solenoid Volt Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm + Check tolerance mm +	RACTE	1150 1000 3.3 0.4 0.7 12 750 1000 1.2 0.4	 	Rated speed rpm Aneroid pressure hPa Overflow quantity ccm/10s Tolerance ccm/10s +- Check tolerance ccm/10s +- Shutoff solenoid Volt DELIVERY AND BREA Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-	KAWA	1125 1000 97.2 41.6 41.6 12 1225 1000 70.0 3.0	STIC

Aneroid pressure	:	1000	-	<u> </u>	Rated speed rpm Aneroid pressure	:	450
Del. quantity	·		-	+	hPa	:	200
cm3/1000 strokes Check tolerance	:	7.5	- -	t	Del. quantity cm3/1000 strokes		77.0
cm3/1000s. +-	:	7.5	-	Ţ	Tolerance	•	77.0
Shutoff solenoid Volt		12	-	t	cm3/1000 str. +-	:	2.5
VOLL	•	12	-		Check tolerance cm3/1000s. +-	:	4.0
Rated speed rpm	:	1350	-	+	Shutoff solenoid		40
Aneroid pressure hPa	:	1000	7	1	Volt	:	12
Del. quantity			-	+	Rated speed rpm	:	650
cm3/1000 strokes Tolerance	:	1.5	-	İ	Aneroid pressure hPa	:	1000
cm3/1000 str. +	:	1.5	-	+	Del. quantity		
Check tolerance cm3/1000s. +-		1.5	-	Ì	cm3/1000 strokes Tolerance	:	116.0
Shutoff solenoid	•			Į.	cm3/1000 str. +	:	2.5
Volt	:	12	-	†	Check tolerance cm3/1000s. +-		4.0
Rated speed rpm	:	1265	•	Ţ	Shutoff solenoid	•	4.0
Aneroid pressure		4000	-	+	Volt	:	12
hPa Del. quantity	•	1000	-		Rated speed rpm	:	1000
cm3/1000 strokes	:	35.0	-	+	Aneroid pressure		
Tolerance cm3/1000 str. +-	:	20.0		 	hPa Del. quantity	:	1000
Check tolerance			-	+	cm3/1000 strokes	:	108.0
cm3/1000s. $+$ Shutoff solenoid	:	20.0	-	t	Tolerance cm3/1000 str. +-		2.5
Volt	:	12	-	-	Check tolerance	•	2.5
Rated speed rpm	:	450	•		cm3/1000s. +- Shutoff solenoid	:	4.0
Aneroid pressure	•	430		Ţ	Volt	:	12
hPa	:	400	-	+	Detect speed son		/50
LDA/			-	Ţ	Rated speed rpm Aneroid pressure	:	450
HBA stroke mm	:	7.5	•	+	hPa	:	1000
Del. quantity cm3/1000 strokes	:	101.0	-	İ	Del. quantity cm3/1000 strokes	:	123.0
Tolerance			-	+	Tolerance		
cm3/1000 str. +- Check tolerance	:	0.5	-	‡	cm3/1000 str. +- Check tolerance	:	4.5
cm3/1000s. +-	:	3.5	~	+	cm3/1000s. +-	:	6.0
Shutoff solenoid Volt	:	12	•	İ	Shutoff solenoid Volt	:	12
	•		-	+		•	
Rated speed rpm Aneroid pressure	:	1125	•	İ	Rated speed rpm Aneroid pressure	:	800
hPa	:	1000	-	-	hPa	:	1000
Del. quantity cm3/1000 strokes		104.0	-	t	Del. quantity cm3/1000 strokes		116.0
Tolerance	•		-	Ţ	Tolerance	•	110.0
cm3/1000 str. +-	:	2.5	i	t	cm3/1000 str. +-	:	0.5
Check tolerance cm3/1000s. +-	:	4.0	1		Check tolerance cm3/1000s. +	:	2.5
Shutoff solenoid			-	+	Shutoff solenoid	_	
Volt	:	12	1		Volt	:	12

MECHANICAL SHUTOF	F		
Rated speed rpm	:	1150	
Aneroid pressure hPa	:	1500	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. ←	· :	1.5	
Spread cm3/1000 strokes	:	5.0	
Check tolerance cm3/1000s. +-	٠:	1.5	
Spread cm3/1000 strokes	:	5.0	
Shutoff solenoid Volt	:	12	
ELECTR. SHUTOFF			·
CONTROL LEVER, ID	LE S	STOP	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. +-	· :	1.5	
Check tolerance cm3/1000s. +	· :	1.5	
Spread cm3/1000 strokes	:	5.0	
FULL-LOAD STOP CO	NTRO	DL LEVER	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes Tolerance	:	1.5	
cm3/1000 str. +-	· :	1.5	
cm3/1000 strokes Check tolerance	:	5.0	
cm3/1000S. +-	:	1.5	
cm3/1000 strokes	:	5.0	
IDLE DELIVERY			
Rated speed rpm Del. quantity	:	450	
cm3/1000 strokes Tolerance	:	1.5	
cm3/1000 str. +- Check tolerance	• :	1.5	
	:	1.5	
Volt	•	12	

: 12

START TRANSITION

Rated speed rpm Del. quantity	:	220
cm3/1000 strokes	:	60.0
Tolerance cm3/1000 str. +- Shutoff solenoid	:	30.0
Volt	:	12
Rated speed rpm	:	170
Del. quantity cm3/1000 strokes	:	170 120.0
Del. quantity	:	

ASSEMBLY AND ADJUSTMENT DIMENSIONS

12

End of rest-specification sheet

Volt

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.03.96 Edition Test oil : ISO 4113

Part no. : 0 460 424 107 Pump designation : VE4/12F1150R609

Customer-spec. information Customer : MAN

Motor : D 0324 LUE 522

Power KW 92.0

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C Tolerance °C +:

Overflow

restriction mm : 0.75

Inlet press. bar : 0.35 Tolerance bar + : 0.05

Test nozzle holde

: 1 688 901 110 assembly

Opening pressure

Tolerance bar +-: 3

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm 840

REMARKS

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 850

Aneroid pressure

1000

Setting mm 2.4 Tolerance mm +: 0.2

Shutoff solenoid

Volt 12

SUPPLY PUMP PRESSURE

Rated speed rpm 850

Aneroid pressure

hPa 1000

Supply pomp

pressure bar 6.7 Tolerance bar + : 0.3

Shutoff solenoid

Volt 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 900

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 str. + :0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 12

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 63.0

Tolerance

cm3/1000 str. + :0.5

Shutoff solenoid

Volt 12

Check tolerance

cm3/1000s.4.5

IDLE SETTING

Rated speed rpm 350

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 str. +-: 2.0

Shutoff solenoid

Volt 12

Conned	1
Spread cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. : 6.5	+ hPa : 1000
	+ Supply pomp + pressure bar : 8.0
EUL LOAD COECH ATTON	+ Shutoff solenoid
FULL-LOAD SPEED REGULATION	+ Volt : 12
Rated speed rpm : 1250	+ Rated speed rpm : 500
Pressure hPa : 1000	+ Aneroid pressure
Del. quantity	+ hPa : 1000
cm3/1000 strokes : 62.0	+ Supply pomp
Tolerance	pressure bar : 5.2
cm3/1000 str. + : 3.0	+ Tolerance bar +: 0.3
Shutoff solenoid	+ Shutoff solenoid
Volt : 12	+ Volt : 12
	+
STARTING FUEL DELIVERY	OVERFLOW QUANTITY
Rated speed rom : 100	Rated speed rpm : 500
Del. quantity	Overflow quantity
cm3/1000 strokes : 120.0	+ ccm/10s : 111.1
Tolerance	Tolerance
cm3/1000 str. + : 30.0	+ ccm/10s + : 22.2
Shutoff salenaid	ount too
Volt : 12	Check tolerance
, ,	+ ccm/10s + : 22.2
	1
	# Shirtoff solenoid
	+ Shutoff solenoid
	+ Shutoff solenoid + Volt : 12
	+ Volt : 12
TNJECTION-PIMP TEST SPECIFICATIO	Volt : 12
INJECTION-PUMP TEST SPECIFICATION	Volt : 12 Rated speed rpm : 1150 NS Aneroid pressure
	Volt : 12 Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000
INJECTION—PUMP TEST SPECIFICATION TIMING DEVICE CHARACTERISTIC	Volt : 12 Rated speed rpm : 1150 NS
TIMING DEVICE CHARACTERISTIC	Volt : 12 Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150	Volt : 12 Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure	Volt : 12 Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s +: 41.6
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7 Shutoff solenoid	Rated speed rpm : 1150 NS Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Check tolerance ccm/10s
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm +-: 0.4	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Check tolerance ccm/10s
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm + : 0.4 Check	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm + : 0.4 Check tolerance mm + : 0.7	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 8.5
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 8.5 Shutoff solenoid
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm + : 0.4 Check tolerance mm + : 0.7	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 8.5
TIMING DEVICE CHARACTERISTIC Reted speed rpm : 1150 Aneroid pressure hPa : 1000 SV travel mm : 3.3 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 12 Rated speed rpm : 750 Aneroid pressure hPa : 1000 SV travel mm : 1.2 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Shutoff solenoid	Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 152.7 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Check toleroid Volt : 12 DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 62.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 8.5 Shutoff solenoid Volt : 12

Aneroid pressure hPa :	1000	+ KSB/AFB Volt : 12
Del. quantity cm3/1000 strokes : Check tolerance	16.0	Rated speed rpm : 500
cm3/1000s. +: Shutoff solenoid	16.0	Aneroid pressure hPa : 1000
Volt :	12	+ Del. quantity + cm3/1000 strokes : 105.5
Rated speed rpm : Aneroid pressure	1350	+ Tolerance + cm3/1000 str. +-: 4.5 + Check tolerance
hPa : Del. quantity	1000	cm3/1000s. +: 6.0 Shutoff solenoid
cm3/1000 strokes : Tolerance	1.5	Volt : 12
cm3/1000 str. + : Check tolerance	1.5	Rated speed rpm : 900 Aneroid pressure
cm3/1000s. +-: Shutoff solesoid	1.5	hPa : 1000 Del. quantity
Volt :	12	cm3/1000 strokes : 100.0 Tolerance
Rated speed rpm : Aneroid pressure		cm3/1000 str. +: 0.5 Check tolerance
hPa :	300	cm3/1000s. +: 2.5 Shutoff solenoid
LDA/ HBA stroke mm :	7.0	+ Volt : 12
Del. quantity cm3/1000 strokes : Tolerance	88.0	MECHANICAL SHUTOFF
cm3/1000 str. +:	0.5	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. +: Shutoff solenoid	3.5	hPa : 1000 Del. quantity
Volt :	12	cm3/1000 strokes : 1.5 Tolerance
Rated speed rpm : Aneroid pressure	1150	cm3/1000 str. +-: 1.5 Spread
hPa : Del. quantity	1000	cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : Tolerance		+ cm3/1000s. +-: 1.5 + Spread
cm3/1000 str. +-: Check tolerance		+ cm3/1000 strokes : 5.0 + Shutoff solenoid
cm3/1000S. +: Shutoff solenoid Volt :		Volt : 12
Volt : Rated speed rpm :		ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
Aneroid pressure		Rated speed rpm : 350
Del. quantity cm3/1000 strokes :		Del. quantity cm3/1000 strokes : 1.5
Tolerance cm3/1000 str. +-:		Tolerance cm3/1000 str. +: 1.5
Check tolerance cm3/1000s. +-:	4.0	Check tolerance cm3/1000s. +: 1.5
Shutoff solenoid Volt :	12	Spread cm3/1000 strokes : 5.0
		Т

FULL-LOAD STOP CO	VTR	OL LEVER	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. +-		1.5	
Spread			
cm3/1000 strokes Check tolerance	:	5.0	
$cm3/1000s.$ \leftarrow	:	1.5	
Spread cm3/1000 strokes	:	5.0	
IDLE DELIVERY			
Rated speed rpm	•	500	
Del. quantity			
cm3/1000 strokes Tolerance	:	1.5	
cm3/1000 str. +- Check tolerance	:	1.5	
cm3/1000s. +-	:	1.5	
Shutoff solenoid Volt	:	12	
START TRANSITION			
Rated speed rpm	•	220	
Del. quantity			
cm3/1000 strokes Tolerance	:	60.0	
cm3/1000 str. +- Shutoff solenoid	:	30.0	
Volt	:	12	
Rated speed rpm Del. quantity	:	170	
cm3/1000 strokes	:	120.0	
Tolerance cm3/1000 str. +-	:	30.0	
Shutoff solenoid Volt	:	12	
· - • •	•		
ASSEMBLY AND ADJUS	STM	ENT DIMENSIONS	
LDA/ HBA stroke mm Dimension K mm Tolerance mm +- Dimension KF mm	:	7.0 3,7 0,1 6,4	

Tolerance mm + : 0,2 Dimension MS mm : 1,3 Tolerance mm + : 0,2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.06.96 Edition Test oil : ISO 4113

: 0 460 426 222 Part no. Pump designation: VE6/12F1100R543

Customer-spec. information

Customer : MAN

: D 0826 LE 521 Motor Power KW : 140.0

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C 45 : Tolerance *C +:

Overflow

0.55 restriction mm :

Inlet press. bar : 0.35 Tolerance bar +: 0.05

Test nozzle holde

: 1 688 901 110 assembly

Opening pressure

250 bar Tolerance bar ←: 3

Test Lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Prestroke

(as of UT) mm : 0,2 Tolerance mm +-: 0,02

Check

tolerance mm + : 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 900

Aneroid pressure

hPa 1000

Setting mm 2.0 Tolerance mm + : 0.2

Shutoff solenoid

Volt 12

SUPPLY PUMP PRESSURE

900 Rated speed rom :

Aneroid pressure

hPa 1000 Supply pomp

pressure bar 7.2 Tolerance bar + : 0.3

Shutoff solenoid

Volt 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 800

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 104.0

Tolerance

cm3/1000 str. +-: 0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

12 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 63.0

Tolerance

cm3/1000 str. +-: 0.5

Shutoff solenoid

12 Volt

Check tolerance

cm3/1000s. 4.5

IDLE SETTING

		+ Tolerance
Rated speed rpm Del. quantity	: 370	+ cm3/1000 str. $+$: 0.1
cm3/1000 strokes Tolerance	: 10.0	+ Shutoff solenoid + Volt : 12
cm3/1000 str. +-	: 3.5	TIMING-DEVICE TRAVEL DIFFERENCE
Volt Spread	: 12	Rated speed rpm : 900
cm3/1000 strokes Check tolerance	: 6.0	+ Aneroid pressure + hPa : 1000
cm3/1000s.	: 6.5	+ Del. quantity + cm3/1000 strokes : −1.0 + Tolerance
		cm3/1000 str. + : 0.1 Shutoff solenoid
FULL-LOAD SPEED R	EGIII ATTON	Volt : 12
LACE FOUR OLFER IN	EGOCATION	T
Rated speed rpm Pressure hPa	: 1200 : 1000	INJECTION-PUMP TEST SPECIFICATIONS
Del. quantity cm3/1000 strokes		TIMING DEVICE CHARACTERISTIC
Tolerance cm3/1000 str. +-		Rated speed rpm: : 1000 Aneroid pressure
Shutoff solenoid	: 12	hPa : 1000
1011	, ,,	SV travel mm : 2.4
STARTING FUEL DEL	IVERY	Tolerance mm + : 0.4 Check
Rated speed rpm Del. quantity	: 100	tolerance mm + : 0.7 Shutoff solenoid
cm3/1000 strokes Tolerance	: 110.0	volt : 12
cm3/1000 str Shutoff solenoid	: 30.0	Rated speed rpm : 800 Aneroid pressure
Volt	: 12	hPa : 1000
		SV travel mm : 0.9
LOAD-DEPENDENT ST	ART OF DELIVERY	Tolarance mm + : 0.4 Check
SETTING		<pre>+ tolerance mm + : 0.7 + Shutoff solenoid</pre>
DELIVERY DIFFEREN		+ Volt : 12
Rated speed rpm Pressure hPa	: 900 : 1000	SUPPLY PUMP PRESSURE CHARACTERISTIC
Del. quantity cm3/1000 strokes	: -20.0	+ Rated speed rpm : 1100 + Aneroid pressure
Tolerance cm3/1000 str. +-	: 1.0	† hPa : 1000 † Supply pomp
Shutoff solenoid Volt	: 12	+ pressure bar : 8.3 + Tolerance bar + : 0.3
PRESSURE DIFFEREN		Shutoff solenoid Volt : 12
		+
Rated speed rpm Aneroid pressure	: 900	Rated speed rpm : 500 Aneroid pressure
hPa Del. quantity	: 1000	hPa : 1000 + Supply pomp
cm3/1000 strokes	: -0.2	pressure bar : 4.9

Tolerance bar +-	:	0.3		+	Tolerance		
Shutoff solenoid Volt	:	12		‡	cm3/1000 str. +- Check tolerance	:	1.5
	•			+	cm3/1000s. +-	:	1.5
OVERFLOW QUANTITY				1	Shutoff solenoid Volt		12
Rated speed rpm		500		+		•	
Overflow quantity ccm/10s		63.8		<u> </u>	Rated speed rpm Aneroid pressure	:	1240
Tolerance	•			+	hPa	:	1000
ccm/10s +-	:	22.2		<u>†</u>	Del. quantity cm3/1000 strokes		40.0
Check tolerance				+	Tolerance		
ccm/10s +- Shutoff solenoid	:	22.2		<u> </u>	cm3/1000 str. +- Check tolerance	:	20.0
Volt	:	12		+	cm3/1000s. +-	:	20.0
Rated speed rpm	:	1100		İ	Shutoff solenoid Volt		12
Aneroid pressure	•			Ŧ		•	
hPa Overflow quantity	:	1000		<u>†</u>	Rated speed rpm Aneroid pressure	:	500
ccm/10s	:	97.2		Ŧ	hPa	:	350
Tolerance ccm/10s +-	:	41.6		İ	LDA/		
	•	41.0		+	HBA stroke mm	:	6.8
Check tolerance ccm/10s +-	:	41.6		<u>†</u>	Del. quantity cm3/1000 strokes		92.0
Shirtoff solenoid	•			+	Tolerance		
Volt	:	12		İ	cm3/1000 str. ÷− Check tolerance	:	0.5
DELIVERY AND BREA	KAWA	Y CHARACT	ERISTIC	+	cm3/1000s. +-	:	4.0
Rated speed rpm	:	1200		1	Shutoff solenoid Volt		12
Aneroid pressure	·			+		•	_
hPa Del. quantity	:	1000		1	Rated speed rpm Aneroid pressure	:	1100
cm3/1000 strokes	:	70.0		+	hPa	:	1000
Tolerance cm3/1000 str. +-	•	2.0		‡	Del. quantity cm3/1000 strokes	•	95.0
Check tolerance	·			+	Tolerance		
cm3/1000s. + Shutoff solenoid	:	8.5		‡	cm3/1000 str. +- Check tolerance	:	2.5
Volt	:	12		+	cm3/1000s. +-	:	4.0
Rated speed rpm	:	1290		‡	Shutoff solenoid Volt	:	12
Aneroid pressure				+			
hPa Del. <u>qua</u> ntity	:	1000		‡	Rated speed rpm Aneroid pressure	:	650
cm3/1000 strokes	:	7.5		+	hPa	:	1000
Check tolerance cm3/1000s. +-	:	7.5		‡	Del. quantity cm3/1000 strokes	:	104.0
Shutoff solenoid	_	12		+	Tolerance		
Volt	•	12		Ţ	cm3/1000 str. +- Check tolerance	•	2.5
Rated speed rpm	:	1320		†	cm3/1000s. +- Shutoff solenoid	:	4.0
Aneroid pressure hPa	:	1000		Ţ	Volt	:	12
Del. quantity cm3/1000 strokes	•	1.5		<u>†</u>	Rated speed rpm	•	1000
CHD/ 1000 SUI ORES	•	1.5		Ţ	varen sheen i hiii	•	1000

Aneroid pressure		+ Del. quantity
hPa :	1000	+ cm3/1000 strokes : 1.5
Del. quantity	7000	+ Tolerance
cm3/1000 strokes :	97.5	+ cm3/1000 str. +: 1.5
	77.3	
Tolerance	2.5	+ Check tolerance
cm3/1000 str. + :	2.5	+ cm3/1000s. +-: 1.5
Check tolerance		+ Spread
cm3/1000s. +:	4.0	+ cm3/1000 strokes : 5.0
Shutoff solenoid	• •	†
Volt :	12	+ FULL-LOAD STOP CONTROL LEVER
		†
Rated speed rpm :	500	+ Rated speed rpm : 300
Aneroid pressure		+ Del. quantity
hPa :	1000	+ cm3/1000 strokes : 1.5
Del. quantity		+ Tolerance
cm3/1000 strokes :	113.0	+ cm3/1000 str. +-: 1.5
Tolerance		+ Spread
cm3/1000 str. +:	6.0	+ cm3/1000 strokes : 5.0
Check tolerance		+ Check tolerance
cm3/1000s. +:	6.5	+ cm3/1000s. +-: 1.5
Shutoff solenoid		Spread
Volt :	12	+ cm3/1000 strokes : 5.0
Rated speed rpm :	800	+ IDLE DELIVERY
Aneroid pressure		
hPa :	1000	+ Rated speed rpm : 450
Del. quantity		+ Del. quantity
cm3/1000 strokes :	104.0	+ cm3/1000 strokes : 1.5
Tolerance	104.0	+ Tolerance
cm3/1000 str. +:	0.5	+ cm3/1000 str. + : 1.5
Check tolerance	0.5	+ Check tolerance
cm3/1000s. +:	3.0	+ cm3/1000s. +: 1.5
Shutoff solenoid	3.0	Shutoff solenoid
Volt :	12	+ Volt : 12
	12	12
		I
MECHANICAL SHUTOFF		I
HECHANICAE SHOTOTT		
Rated speed rpm :	1100	
Aneroid pressure		+ CHECKING LOAD-DEPENDENT
hPa :	1000	+ START OF DELIVERY
Del. quantity		OTALL OF ACCTACIO
cm3/1000 strokes :	1 5	T DELIVERY DIFFERENCE
Tolerance	1 • •	APPTACUI ATLICUPIACE
cm3/1000 str. + :	1.5	Rated speed rpm : 900
Spread	1.2	+ Aneroid pressure
cm3/1000 strokes :	5.0	+ hPa : 1000
Check tolerance	J.U	+ Del. quantity
cm3/1000s. +:		
Spread:	1 5	+ cm3/1000 strokes : -30.0
SPLESIO	1.5	1 Tolonopeo
		Tolerance
cm3/1000 strokes :		+ cm3/1000 str. $+$: 10.0
cm3/1000 strokes : Shutoff solenoid	5.0	cm3/1000 str. + : 10.0 Check tolerance
cm3/1000 strokes :		cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0
cm3/1000 strokes : Shutoff solenoid	5.0	cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0 Shutoff solenoid
cm3/1000 strokes : Shutoff solenoid Volt :	5.0	cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0
cm3/1000 strokes : Shutoff solenoid Volt : ELECTR. SHUTOFF	5.0 12	cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0 Shutoff solenoid Volt : 12
cm3/1000 strokes : Shutoff solenoid Volt :	5.0 12	cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0 Shutoff solenoid
cm3/1000 strokes : Shutoff solenoid Volt : ELECTR. SHUTOFF	5.0 12 STOP	cm3/1000 str. +: 10.0 Check tolerance cm3/1000s. +: 10.0 Shutoff solenoid Volt : 12

Aneroid pressure hPa	;	1000	
Del. quantity cm3/1000 strokes	:	-1.0	
Tolerance cm3/1000 str. +-	:	0.1	
Check tolerance cm3/1000s. +- Shutoff solenoid	:	0.1	
Volt	:	12	
DELIVERY DIFFEREN	CE		
Rated speed rpm Aneroid pressure	:	900	
hPa Del. quantity	:	1000	
cm3/1000 strokes Tolerance	:	5.0	
cm3/1000 str. +- Check tolerance	:	3.0	
cm3/1000s. +- Shurcoff solenoid	:	3.0	
Volt	:	12	
TIMING-DEVICE TRA	VEL	DIFFERENCE	
Rated speed rom Aneroid pressure	:	900	
hPa Tolerance mm +-	:	1000 1.0	
		7.0	
Check tolerance mm +-	:	1.0	
Check	:		
Check tolerance mm +- Shutoff solenoid Volt		1.0	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION	:	1.0 12	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity		1.0	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm	:	1.0 12 450	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	•	1.0 12 450 60.0	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid	:	1.0 12 450 60.0 30.0	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid Volt Rated speed rpm Del. quantity	:	1.0 12 450 60.0 30.0 12	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid Volt Rated speed rpm Del. quantity cm3/1000 strokes Tolerance		1.0 12 450 60.0 30.0 12 350 110.0	
Check tolerance mm + Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid Volt Rated speed rpm Del. quantity cm3/1000 strokes	:	1.0 12 450 60.0 30.0 12	

ASSEMBLY AND ADJUSTMENT DIMENSIONS

LDA/
HBA stroke mm : 6.8
Dimension KF mm : 6,0
Tolerance mm + : 0,2
MS1 dimension mm : 1,2
Tolerance mm + : 0,2
SVS dimension mm : 2,5

CONTROL LEVER POSITION SET

Control lever

position YA mm : 37,4..40,4

Control lever

position YB mm : 43,4..48,6

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 04,11,91 Edition : ISO 4113 Test oil : 0 460 484 047 Part no. Pump designation: VE4/8F2300R425 Customer-spec. information Customer : PSA Motor : XUD 9A (1.9L.) TEST BENCH REQUIREMENTS Inlet press. bar : 0.35 Tolerance bar + : 0.05 Test nozzle holde : 1 688 901 022 assembly Opening pressure bar Tolerance bar +-: Test Lines : 1 680 750 073 Cutside diameter : 6.00 2.00 x inside diameter : x length mm : 450 REMARKS BEGINNING OF DELIVERY Start of delivery blocking

Setting mm 3.6 Tolerance mm +-: 0.2 Shutoff solenoid Volt 12 SUPPLY PUMP PRESSURE Rated speed rpm : 1250 Supply pomp pressure bar 6.5 Tolerance bar + : 0.3 Shutoff solenoid Volt 12 FULL-LOAD DELIV. WITHOUT BOOST PRESSURE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : 28.4 Tolerance cm3/1000 str. +-: 0.5 Spread cm3/1000 strokes : 2.0 Shutoff solenoid Volt 12 HOUSING-FIXED IDLE SPRING RESIDUAL QUANTITY SETTING Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 2.5 Tolerance cm3/1000 str. + :0.5 Shutoff solenoid Volt 12 IDLE DELIVERY Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 8.0 Tolerance cm3/1000 str. +-: 1.0 Spread cm3/1000 strokes : 2.0 Shutoff solenoid Volt 12 HIGH IDLE SETTING Rated speed rpm : 475 Del. quantity cm3/1000 strokes : 8.0 Tolerance cm3/1000 str. +-: 1.0

Rated speed rpm : 1250

Outlet

Plunger stroke mm: 0,3

TIMING DEVICE TRAVEL

INJECTION PUMP SETTING VALUES

: A

Shutoff solenoid Volt : 12	TIMING DEVICE CHARACTERISTIC
FULL-LOAD SPEED REGULATION	Rated speed rpm : 2000
Rated speed rpm : 2650 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 str. + : 2.0 Shutoff solenoid	SV travel mm : 7.9 Tolerance mm +-: 0.4 Check tolerance mm +-: 0.7 Shutoff solenoid Volt : 12
Volt : 12	Rated speed rpm : 800
STARTING FUEL DELIVERY	SV travel mm : 1.4
Rated speed rpm : 100	Tolerance mm + : 0.4 Check
cm3/1000 strokes : 48.0	tolerance mm + : 0.7 Shutoff solenoid
cm3/1000 str. ←: 13.0 + Shutoff solenoid +	Volt : 12
Volt : 12	SUPPLY PUMP PRESSURE CHARACTERISTIC
1	Rated speed rpm : 2200 Supply pomp
LOAD-DEPENDENT START OF DELIVERY	pressure bar : 8.8
SETTING	Tolerance bar +-: 0.3
DELIVERY DIFFERENCE	Shutoff solenoid Volt : 12
Rated speed rpm : 1250 Del. quantity	Rated speed rpm : 500 Supply pomp
cm3/1000 strokes : -7.5	pressure bar : 4.7
cm3/1000 str. +: 1.0	Tolerance bar +: 0.3 Shuroff solenoid
Shutoff solenoid + 12 + 12	Volt : 12
• • • • • • • • • • • • • • • • • • • •	OVERFLOW QUANTITY
PRESSURE DIFFERENCE	
Rated speed rpm : 1250	Overflow quantity
Del. quantity cm3/1000 strokes : -0.2	ccm/10s : 97.2 Tolerance
Tolerance + cm3/1000 str. ÷ : 0.1	ccm/10s +: 41.6
Shutoff solenoid Volt : 12	Check tolerance ccm/10s +-: 55.5 Shutoff solenoid
TIMING-DEVICE TRAVEL DIFFERENCE	Volt : 12
Rated speed rpm : 1250 Del. quantity	Rated speed rpm : 500 Overflow quantity
cm3/1000 strokes : -1.0	ccm/10s : 62.5 Tolerance
cm3/1000 str. +-: 0.1 Shutoff solenoid	ccm/10s ←: 20.8
Volt : 12	Check tolerance ccm/10s ←: 34.7
+	Shutoff solenoid
INJECTION—PUMP TEST SPECIFICATIONS +	Volt : 12

	1	
DELIVERY AND BREAKAW	AY CHARACTERISTIC	
Rated speed rpm :	2650 +	MECHANICAL SHUTOFF
Del. quantity	+	Rated speed rpm : 2200
cm3/1000 strokes : Tolerance	12.0	Del. quantity cm3/1000 strokes : 1.5
cm3/1000 str. +:	2.0	cm3/1000 strokes : 1.5 Tolerance
Check tolerance	+	cm3/1000 str. +: 1.5
cm3/1000s. +-: Shutoff solenoid	4.0	Check tolerance cm3/1000s. +-: 1.5
Volt :	12	Shutoff solenoid Volt : 12
Rated speed rpm : Del. quantity	2500	, 12
cm3/1000 strokes :	24.0	ELECTR. SHUTOFF
Check tolerance	+	CONTROL LEVER, IDLE STOP
cm3/1000s. +-: Shutoff solenoid	5.0	Rated speed rpm : 375
Volt :	12	Del. quantity
Rated speed rpm :	2900	cm3/1000 strokes : 1.5 Tolerance
Del. quantity	+	cm3/1000 str. + : 1.5
cm3/1000 strokes :	3.0	Check tolerance
Tolerance cm3/1000 str. +-:	3.0	cm3/1000s. +: 1.5 Shutoff solenoid
Check tolerance	+	Volt : 12
cm3/1000s. + : Shutoff solenoid	3.0	
Volt :	12	
Rated speed rpm :	22 0 0 I	
	2200	
Del. quantity cm3/1000 strokes :	32.1	CUEDICANO I CAN ASSCRIATA
Del. quantity cm3/1000 strokes : Tolerance	32.1	CHECKING LOAD-DEPENDENT START OF DELIVERY
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +- : Check tolerance	32.1	START OF DELIVERY
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance cm3/1000s. + :	32.1	
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +- : Check tolerance	32.1	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000S. +-: Shutoff solenoid Volt :	32.1 1.0 2.2 12	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt: Rated speed rpm Del. quantity	32.1 1.0 2.2 12 500	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm Del. quantity cm3/1000 strokes:	32.1 1.0 2.2 12	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +:	32.1 1.0 2.2 12 500	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +:	32.1 1.0 2.2 12 500 29.3	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1000 str. +: 2.0 Check tolerance
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance	32.1 1.0 2.2 12 500 29.3 1.5	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0 Shutoff solenoid
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm: Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm:	32.1 1.0 2.2 12 500 29.3 1.5 3.0	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0 Shutoff solenoid Volt : 12 TIMING-DEVICE TRAVEL DIFFERENCE Rated speed rpm : 1250
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000s. +:	32.1 1.0 2.2 12 500 29.3 1.5 3.0	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0 Shutoff solenoid Volt : 12 TIMING-DEVICE TRAVEL DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -1.0
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000 strokes: Tolerance cm3/1000 strokes: Tolerance cm3/1000 strokes: Tolerance cm3/1000 strokes:	32.1 1.0 2.2 12 500 29.3 1.5 3.0 12	START OF DELIVERY DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1000 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0 Shutoff solenoid Volt : 12 TIMING-DEVICE TRAVEL DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -1.0 Tolerance cm3/1000 str. + : 0.1
Del. quantity cm3/1000 strokes: Tolerance cm3/1000 str. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000 strokes: Tolerance cm3/1000s. +: Check tolerance cm3/1000s. +: Shutoff solenoid Volt: Rated speed rpm Del. quantity cm3/1000s. +: Tolerance cm3/1000s. +: Tolerance cm3/1000s. +: Tolerance	32.1 1.0 2.2 12 500 29.3 1.5 3.0 12 1250 28.4	DELIVERY DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -11.5 Tolerance cm3/1009 str. + : 2.0 Check tolerance cm3/1000s. + : 5.0 Shutoff solenoid Volt : 12 TIMING-DEVICE TRAVEL DIFFERENCE Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : -1.0 Tolerance

DELIVERY DIFFERENCE

Rated speed rpm	:	1250
Del. quantity cm3/1000 strokes	:	5.0
Tolerance cm3/1000 str. +-	:	3.0
Check tolerance cm3/1000s. +	:	3.0
Shutoff solenoid		12

PRESSURE DIFFERENCE

Rated speed rpm Supply pomp	:	1250
pressure bar Tolerance bar +-	:	-1.1 0.2
Shutoff solenoid	:	12

TIMING-DEVICE TRAVEL DIFFERENCE

Rated speed rpm	:	1250
Tolerance mm +-	:	0.2
Check		
tolerance min +	:	0.7
Shutoff solenoid		
Volt	:	12

START TRANSITION

Rated speed rpm Del. quantity	:	350
cm3/1000 strokes	:	30.0
Tolerance cm3/1000 str. + Shutoff solenoid	:	10.0
Volt	:	12
Rated speed rom Del. quantity	:	225
cm3/1000 strokes	•	54.0

Del. quantity
cm3/1000 strokes : 54.0
Tolerance
cm3/1000 str. +-: 17.0
Shutoff solenoid
Volt : 12

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension K mm : 3,7
Tolerance mm + : 0,1
Dimension KF mm : 6,0
Tolerance mm + : 0,2
Dimension MS mm : 1,4
Tolerance mm + : 0,2

End of test-specification sheet

L11

4	
BOSCH INJ. PUMP TEST SPECIFICATIONS	Plunger stroke mm : 0,3 Outlet : A
Note remarks	
Refer to Service Info for test and adjustment instructions.	INJECTION PUMP SETTING VALUES
See microcard(s) W400/	TIMING DEVICE TRAVEL
Edition : 10.04.95 Test oil : ISO 4113	Rated speed rpm : 1250
+	Setting mm : 3.7 Tolerance mm +-: 0.2
Part no. : 0 460 484 097 + Pump designation : VE4/8F2300R425-10 +	· Tolerance mm +-: U.2 · Shutoff solenoid
	· Volt : 12
Customer spec. information Customer : PSA	SUPPLY PUMP PRESSURE
Customer : PSA Hotor : XUD9 A-L Power KW : 51.0 Hotor	Rated speed rpm : 1250
Power KW : 51.0	Supply pomp
	pressure bar : 6.0 Tolerance bar + : 0.3
TEST BENCH REQUIREMENTS	Shutoff solenoid
TEST DESCRIPTION	Volt : 12
Calibrating-oil +	•
return + temperature *C : 45 +	FULL-LOAD DELIV. WITHOUT BOOST PRESSURE
Tolerance *C +: 1	- Pated speed rpm : 1250
Total direct	Del. quantity
Overflow	cm3/1000 strokes : 30.2
restriction mm : 0.55	Tolerance
+	cm3/1000 str. +-: 0.5
7.1.4 9.25 6.25	Spread
Inlet press. bar : 0.35 Tolerance bar + : 0.05	cm3/1000 strokes : 2.0 Shutoff solenoid
Toterance bar 0.05	Volt : 12
1	
Test nozzle holde	•
assembly : 1 68% 90% U22	HOUSING-FIXED IDLE SPRING RESIDUAL QUANTITY SETTING
Opening pressure	•
bar : 130 +	Rated speed rpm : 500
Tolerance bar ←: 3	Del. quantity cm3/1000 strokes : 5.0
<u> </u>	Tolerance
Test Lines : 1 680 750 073	cm3/1000 str. +: 0.5
+	Shutoff solenoid
Outside diameter : 6.00	· Volt : 12
x inside diameter: 2.00	IDLE DELIVERY
× Length mm : 450	
+	Rated speed rpm : 400
DEMARKS	Del. quantity
REMARKS	cm3/1000 strokes : 13.0 Tolerance
I	cm3/1000 str. +-: 1.0
	Spread
BEGINNING OF DELIVERY	cm3/1000 strokes : 2.0
+	Shutoff solenoid
Start of delivery blocking +	Volt : 12

	+	Del. quantity
HIGH IDLE SETTING	· †	cm3/1000 strokes : -1.0 Tolerance
Rated speed rpm Del. quantity	: 475	cm3/1000 str. +-: 0.1 Shutoff solenoid
cm3/1000 strokes Toierance	; 9.5	Volt : 12
cm3/1000 str. +- Shutoff solenoid	· ; 1.0	INJECTION-PUMP TEST SPECIFICATIONS
Volt	; 12	TIMING DEVICE CHARACTERISTIC
FULL-LOAD SPEED R	REGULATION	
Rated speed rpm	: 2650	Rated speed rpm : 2000
Del. quantity	+	SV travel mm : 7.1
cm3/1000 strokes	: 11.0	Tolerance mm +-: 0.4 Check
cm3/1000 str. +- Shutoff solenoid	·: 2.0	tolerance mm + : 0.7 Shutoff solenoid
Volt	: 12	Volt : 12
STARTING FUEL DEL	IVERY	Rated speed rpm : 800
Rated speed rpm	: 100	SV travel mm : 1.6
Del. quantity	1	Tolerance mm +-: 0.4
cm3/1000 strokes	: 55.0	Check
Tolerance	+	tolerance mm +: 0.7
cm3/1000 str. +-	-: 13.0	Shutoff solenoid
Shutoff solenoid		Volt : 12
Volt	: 12 +	
	†	SUPPLY PUMP PRESSURE CHARACTERISTIC
	Ī	Rated speed rpm : 2200
LOAD-DEPENDENT ST	ART OF DELIVERY	Supply pomp
SETTING	ART OF PECTALIN	pressure bar : 8.5
VE-12110	1	Tolerance bar +-: 0.3
DELIVERY DIFFEREN	ICE +	Shutoff solenoid
	+	Volt : 12
Rated speed rpm Del. quantity	: 1250	Rated speed rpm : 500
cm3/1000 strokes	: -6.0	Supply pomp
Tolerance	+	pressure bar : 3.6
cm3/1000 str. +- Shutoff solenoid	1.0	Tolerance bar + : 0.3 Shutoff solenoid
Volt	: 12	Volt : 12
PRESSURE DIFFEREN	ICE	OVERFLOW QUANTITY
Rated speed rpm Del. quantity	: 1250	Rated speed rpm : 2200 Overflow quantity
cm3/1000 strokes	: -0.2	ccm/10s : 97.2 Tolerance
Tolerance cm3/1000 str. +-	: 0.1	ccm/10s + : 41.6
Shutoff solenoid Volt	: 12	Check tolerance
	+	ccm/10s +: 55.5
TIMING-DEVICE TRA	VEL DIFFERENCE	Shutoff solenoid Volt : 12
Rated speed rpm	: 1250	. 12
nacea apeea (pii)	1	Rated speed rpm : 500

Overflow quantity ccm/10s : 63.8	+ Shutoff solenoid + Volt : 12
Tolerance	+
ccm/10s +: 22.2	+ Rated speed rpm : 1250 + Del. quantity
Check tolerance ccm/10s +-: 34.7	cm3/1000 strokes : 30.2 Tolerance
Shutoff solenoid Volt : 12	cm3/1000 str. + : 0.5 Check tolerance
	+ cm3/1000s. $+$: 2.2
DELIVERY AND BREAKAWAY CHARACTERISTIC	+ Shutoff solenoid + Volt : 12
Rated speed rpm : 2650 Del. quantity	‡
cm3/1000 strokes : 11.0 Tolerance	ELECTR. SHUTOFF
cm3/i000 str. +-: 2.0 Check tolerance	CONTROL LEVER, IDLE STOP
cm3/1000s. + : 4.0 Shutoff solenoid	Rated speed rpm : 400 Del. quantity
Volt : 12	cm3/1000 strokes : 1.5 Tolerance
Rated speed rpm : 2500 Del. quantity	cm3/1000 str. +: 1.5
cm3/1000 strokes : 22.5	cm3/1000s. + : 1.5
Tolerance cm3/1000 str. +-: 3.0	FULL-LOAD STOP CONTROL LEVER
Check colerance cm3/1000s. +-: 5.0	Rated speed rpm : 400
Shutoff solenoid Volt : 12	Del. quantity cm3/1000 strokes : 1.5
Rated speed rpm : 2900	+ Tolerance + cm3/1000 str. + : 1.5
Del. quantity cm3/1000 strokes : 3.0	Check tolerance + cm3/1000s. + : 1.5
Tolerance cm3/1000 str. + : 3.0	
Check tolerance cm3/1000s. + : 3.0	
Shutoff solenoid	-
	CHECKING LOAD-DEPENDENT
Rated speed rpm : 2200 Del. quantity	+ START OF DELIVERY
cm3/1000 strokes : 33.0 Tolerance	+ DELIVERY DIFFERENCE
cm3/1000 str. + : 1.0 Check tolerance	+ Rated speed rpm : 1250 + Del. quantity
cm3/1000s. +: 2.2 Shutoff solenoid	+ cm3/1000 strokes : -8.5 + Tolerance
Volt : 12	- cm3/1000 str. +-: 5.0 - Check tolerance
Rated speed rpm : 500 Del. quantity	cm3/1000s. +: 5.0 Shutoff solenoid
cm3/1000 strokes : 31.3	Volt : 12
Tolerance cm3/1000 str. + : 1.5	TIMING-DEVICE TRAVEL DIFFERENCE
Check tolerance cm3/1000s. +: 3.0	Rated speed rpm : 1250
	+

Del. quantity			
cm3/1000 strokes Tolerance	:	-1.0	
cm3/1000 str. +-	:	0.1	
Check tolerence cm3/1000s. +-	:	0.1	
Shutoff solenoid		12	
Volî	:	12	
DELIVERY DIFFEREN	CE		
Rated speed rpm Del. quantity	:	1250	
cm3/1000 strokes	:	5.0	
Tolerance cm3/1000 str. +-	:	3.0	
Check tolerance cm3/1000s. +-	:	3.0	
Shutoff solenoid	:	12	
		12	
PRESSURE DIFFEREN	LE		
Rated speed rpm Supply pomp	•	1250	
pressure bar	:	-1.5 0.3	
Tolerance bar +- Shutoff solenoid	:		
Volt	:	12	
TIMING-DEVICE TRA	VFI	NICEPPENCE	
		DITTENDACE	
Rated speed rpm	:	1250	
Rated speed rpm Tolerance mm +- Check			
Tolerance mm +- Check tolerance mm +-	•	1250	
Tolerance mm +- Check	•	1250 0.5	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt	•	1250 0.5 0.6 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid	•	1250 0.5 0.6 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm	•	1250 0.5 0.6 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +-	: :	1250 0.5 0.6 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-	: :	1250 0.5 0.6 12 ATION 1000	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance	: : : :	1250 0.5 0.6 12 ATION 1000	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid	: : : : :	1250 0.5 0.6 12 ATION 1000 1.0 4.0	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt	: : : : :	1250 0.5 0.6 12 ATION 1000 1.0 4.0	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity	: : : : :	1250 0.5 0.6 12 ATION 1000 1.0 4.0 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: : : : : : : : : : : : : : : : : : :	1250 0.5 0.6 12 ATION 1000 1.0 4.0 12	
Tolerance mm +- Check tolerance mm +- Shutoff solenoid Volt EXHAUST-GAS RECIR Rated speed rpm Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt START TRANSITION Rated speed rpm Del. quantity cm3/1000 strokes	: : : : :	1250 0.5 0.6 12 ATION 1000 1.0 4.0 12	

Rated speed rpm : 225
Del. quantity
cm3/1000 strokes : 54.0
Tolerance
cm3/1000 str. + : 17.0
Shutoff solenoid
Volt : 12

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension K mm : 3,7
Tolerance mm + : 0,1
Dimension KF mm : 6,0
Tolerance mm + : 0,2
Dimension MS mm : 1,4
Tolerance mm + : 0,1

Rated speed rpm : 1250 BOSCH INJ. PUMP TEST SPECIFICATIONS Setting mm 3.6 Note remarks Tolerance mm 0.2 Shutoff solenoid Refer to Service Info for test and Volt 12 adjustment instructions. See microcard(s) W400/... SUPPLY PUMP PRESSURE Edition : 31.03.92 Rated speed rpm : 1250 Test oil : ISO 4113 Supply pomp pressure bar 6.5 : 0 460 484 055 Tolerance bar +-: Part no. 0.3 Pump designation: VE4/8F2300R425-2 Shutoff solenoid 12 Volt Customer-spec. information FULL-LOAD DELIV. WITHOUT BOOST PRESSURE Customer : PSA : XUD9A-N2 BVA Motor Rated speed rpm : 1250 Del. quantity cm3/1000 strokes : 30.2 TEST BENCH REQUIREMENTS Tolerance cm3/1000 str. +-: 0.5 Spread cm3/1000 strokes : Inlet press. bar : 0.35 2.0 Tolerance bar +-: Shutoff solenoid Volt 12 Test nozzle holde : 1 688 901 022 assembly HOUSING-FIXED IDLE SPRING RESIDUAL QUANTITY SETTING Opening pressure 130 Rated speed rpm : 500 Tolerance bar +-: Del. quantity cm3/1000 strokes : 3.0 Tolerance Test lines : 1 680 750 073 cm3/1000 str. +-: 0.5 Shutoff solenoid Outside diameter : 6.00 Volt 12 x inside diameter: IDLE DELIVERY 2.00 x length mm : 450 Rated speed rpm : 375 Del. quantity cm3/1000 strokes : REMARKS 7.5 Tolerance cm3/1000 str. +-: 1.0 Spread BEGINNING OF DELIVERY cm3/1000 strokes : 2.0 Shutoff solenoid 12 Start of delivery blocking Volt Plunger stroke mm: 0,3 HIGH IDLE SETTING : A Outlet Rated speed rpm : 475 Del. quantity cm3/1000 strokes : INJECTION PUMP SETTING VALUES 9.5 Tolerance cm3/1000 str. +-: TIMING DEVICE TRAVEL 1.0

Shutoff solenoid Volt : 12	TIMING DEVICE CHARACTERISTIC
FULL-LOAD SPEED REGULATION	Rated speed rpm : 2000
Rated speed rpm : 2650 Del. quantity cm3/1000 strokes : 11.0 Tolerance	SV travel mm : 7.9 Tolerance mm + : 0.4 Check tolerance mm + : 0.7
cm3/1000 str. + : 2.0 Shutoff solenoid	Shutoff solenoid Volt : 12
Volt : 12 STARTING FUEL DELIVERY	Rated speed rpm : 800
SIAKITING FOEL DELIVER!	T SV travel mm : 1.4
Rated speed rpm : 100 Del. quantity	Tolerance mm + : 0.4 Check
cm3/1000 strokes : 55.0 Tolerance	<pre>+ tolerance mm +-: 0.7 + Shutoff solenoid</pre>
cm3/1000 str. +-: 13.0 Shutoff solenoid	+ Volt : 12
Volt : 12	+ SUPPLY PUMP PRESSURE CHARACTERISTIC
	+ Rated speed rpm : 2200 + Supply pomp
LOAD-DEPENDENT START OF DELIVERY	pressure bar : 8.8
SETTING	<pre>† Tolerance bar ←: 0.3 + Shutoff solenoid</pre>
DELIVERY DIFFERENCE	Volt : 12
Rated speed rpm : 1250 Del. quantity	Rated speed rpm : 500 Supply pomp
cm3/1000 strokes : -7.5	pressure bar : 4.7
Tolerance cm3/1000 str. +-: 1.0	+ Tolerance bar + : 0.3 + Shutoff solenoid
Shutoff solenoid	+ Volt : 12
Volt : 12	T OVERFLOW QUANTITY
PRESSURE DIFFERENCE	Rated speed rpm : 2200
Rated speed rpm : 1250	+ Overflow quantity
Del. quantity cm3/1000 strokes : -0.2	+ ccm/10s : 97.2 + Tolerance
Tolerance cm3/1000 str. ← : 0.1	+ ccm/10s +-: 41.6
Shutoff solenoid Volt : 12	Check tolerance + : 55.5
TIMING-DEVICE TRAVEL DIFFERENCE	+ Shutoff solenoid + Volt : 12
Rated speed rpm : 1250	Rated speed rpm : 500
Del. quantity cm3/1000 strokes : -1.0	+ Overflow quantity + ccm/10s : 62.5
Tolerance cm3/1000 str. +-: 0.1 Shutoff salepoid	+ Tolerance + ccm/10s ++: 20.8
Shutoff solenoid Volt : 12	Check tolerance ccm/10s +-: 34.7
INJECTION-PUMP TEST SPECIFICATIONS	+ Shutoff solenoid + Volt : 12

		+ Shutoff solenoid
DELIVERY AND BREAKAW	AY CHARACTERISTIC	Volt : 12
Rated speed rpm :	2650	
Del. quantity cm3/1000 strokes :	11.0	MECHANICAL SHUTOFF
Tolerance	11.0	Rated speed rpm : 2200
cm3/1000 str. +-:	2.0	+ Del. quantity
Check tolerance cm3/1000s. +:	4.0	the cm3/1000 strokes : 1.5
Shutoff solenoid	4.0	+ cm3/1000 str. +: 1.5
Volt :	12	- Check tolerance
Rated speed rom :	2500	+ cm3/1000s. +: 1.5 + Shutoff solenoid
Rated speed rpm : Del. quantity	2500	+ Volt : 12
cm3/1000 strokes :	22.5	
Tolerance	3.0	ELECTR. OURTOSS
cm3/1000 str. +-: Check tolerance	3.0	+ ELECTR. SHUTOFF + CONTROL LEVER, IDLE STOP
cm3/1000s. +-:	5.0	+
Shutoff solenoid	12	+ Rated speed rpm : 375
Volt :	i Z	bel. quantity cm3/1000 strokes : 1.5
Rated speed rpm :	2900	Tolerance
Del. quantity	7.0	+ cm3/1000 str. + : 1.5
cm3/1000 strokes : Tolerance	3.0	+ Check tolerance + cm3/1000s. +-: 1.5
cm3/1000 str. +-:	3.0	+
Check tolerance	7.0	+
cm3/1000s. +-: Shutoff solenoid	3.0	1
Volt :	12	Ţ
Bakad avaid mas	2200	+
Rated speed rpm : Del. quantity	2200	+ CHECKING LOAD-DEPENDENT
cm3/1000 strokes :	33.0	+ START OF DELIVERY
Tolerance	4.0	
cm3/1909 str. +-: Check tolerance	1.0	† DELIVERY DIFFERENCE
cm3/1000s. ←:	2.2	Rated speed rpm : 1250
Shutoff solenoid	40	+ Del. quantity
Volt :	12	+ cm3/1000 strokes : -11.5 + Tolerance
Ruted speed rpm :	500	+ cm3/1000 str. +: 5.0
Del. quantity	74 7	+ Check tolerance
cm3/1000 strokes : Tolerance	31.3	+ cm3/1000s. +: 5.0 + Shutoff solenoid
cm3/1000 str. +-:	1.5	Volt : 12
Check tolerance	7.0	+
cm3/1000s. +: Shutoff solenoid	3.0	TIMING-DEVICE TRAVEL DIFFERENCE
Volt :	12	Rated speed rpm : 1250
		+ Del. quantity
Rated speed rpm : Del. quantity	1250	+ cm3/1000 strokes : -1.0 + Tolerance
cm3/1000 strokes :	30.2	- cm3/1000 str. +-: 0.1
Tolerance		Check tolerance
cm3/1000 str. +-: Check tolerance	0.5	+ cm3/1000s. +-: 0.1 + Shutoff solenoid
cm3/1000s. +-:	2.2	Volt : 12

DELIVERY DIFFERENCE

Rated speed rpm : 1250 Del. quantity

5.0 cm3/1000 strokes :

Tolerance

cm3/1000 str. +-:3.0

Check tolerance

cm3/1000S. 3.0

Shutoff solenoid

12 Volt

PRESSURE DIFFERENCE

Rated speed rpm : 1250

Supply point

pressure bar -1.10.3

Tolerance bar + :

Shutoff solenoid Volt

12

TIMING-DEVICE TRAVEL DIFFERENCE

Rated speed rpm : 0.5 Tolerance mm +:

Check

·-tolerance mm 0.6

Shutoff solenoid

12 Volt

START TRANSITION

Rated speed rpm 350

Del. quantity

cm3/1000 strokes : 30.0

Tolerence

cm3/1000 str. \leftarrow : 10.0

Shutoff solenoid

12 Volt

Rated speed rpm 225

Del. quantity

cm3/1000 strokes : 54.0

Tolerance

cm3/1000 str. +-: 17.0

Shutoff solenoid

12 Volt

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension K mm

Tolerance mm +: 0,1

Dimension KF mm : 6,0 Tolerance mm -:0,2

Dimension MS mm : 1,4

Tolerance mm +-: 0,2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.96 Edition Test oil : ISO 4113

: 0 460 424 098 Part no. Pump designation: VE4/12F1175R533

Customer-spec. information

Customer : MWM

: TD 226-84 Motor Power KW 70.0

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C 45 Tolerance °C ←: 1

Overflow

restriction mm • 0.75

Inlet press. bar : 0.35 Tolerance bar +-: 0.05

Test nozzle holde

: 1 688 901 110 assembly

Opening pressure

bar 250 Tolerance bar + : 3

Test Lines : 1 680 750 000

Outside diameter : 6.00

x inside dimmeter: 2.00 x length mm 840

REMARKS

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 800

Setting mm 4.4 Tolerance mm 0.2 Shutoff solenoid Volt 12

SUPPLY PUMP PRESSURE

008 Rated speed rpm :

Supply pomp

pressure bar 7.2 Tolerance bar +-: 0.3 Shutoff solenoid

12 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 800 Del. quantity

cm3/1000 strokes : 77.3 Tolerance

cm3/1000 str. + :

0.5 Spread cm3/1000 strokes : 4.0

Shutoff solenoid

12 Volt

IDLE SETTING

Rated speed rpm : 275 Del. quantity

cm3/1000 strokes : 10.0

Tolerance

cm3/1000 str. + :3.0

Shutoff solenoid

Volt 12 Spread

cm3/1000 strokes : 3.5 Check tolerance

cm3/1000s. 6.5

FULL-LOAD SPEED REGULATION

Rated speed rpm 1175

Del. quantity

cm3/1000 strokes : 53.0

Tolerance

cm3/1000 str. + :3.0 Shutoff solenoid Volt 12

SET GRADUATED STARTING DELIVERY CONTROL LEVER, IDLE STOP

	+ Shutoff solenoid
Rated speed rpm : 100	+ Volt : 12
Del. quantity	+
cm3/1000 strokes : 100.0	Rated speed rpm : 400
Tolerance	+ Overflow quantity
cm3/1000 str. +: 1.0	+ ccm/10s : 125.0
Shutoff solenoid	+ Tolerance
Volt : 12	+ ccm/10s + : 22.2
	†
	+ Check tolerance
	+ ccm/10s +: 22.2
THI PATTON NIND TRAY COPATETATIONS	- Shutoff solenoid
INJECTION-PUMP TEST SPECIFICATIONS	+ Volt : 12
TIMING DEVICE CHARACTERISTIC	DELIVERY AND RESEAUALIAN CHARACTERICITIC
TIMING DEVICE CHARACTERISTIC	DELIVERY AND BREAKAWAY CHARACTERISTIC
Rated speed rpm : 900	Rated speed rpm : 1175
rated speed (Mill . 700	Dal mantitud
SV travel mm : 5.2	cm3/1000 strokes : 53.0
Tolerance mm + : 0.4	+ Tolerance
Check	- cm3/1000 strokes : 53.0 - Tolerance - cm3/1000 str. + : 3.0 - Check tolerance - cm3/1000s. + : 8.5 - Shutoff solenoid - Volt : 12
tolerance mm - : 0.7	+ Clieck tolerance
Shutoff solenoid	- cm3/1000s. +: 8.5
Volt : 12	+ Shutoff solenoid
	+ Volt : 12
Rated speed rpm : 500	
	↓ Rated speed rpm : 1250
SV travel mm : 2.1	+ Del. quantity
Tolerance mm + : 0.4	+ cm3/1000 strokes : 7.5
Check	+ Check tolerance
tolerance mm +: 0.7	+ cm3/1000s. $+$: 7.5
Shutoff solenoid	+ Shutoff solenoid
Volt : 12	+ Volt : 12
	+
SUPPLY PUMP PRESSURE CHARACTERISTIC	+ Rated speed rpm : 1300
	+ Del. quantity
Rated speed rpm : 1100	+ cm3/1000 strokes : 1.5
Supply pomp	Tolerance
pressure bar : 7.9	+ cm3/1000 str. + : 1.5
Tolerance bar + : 0.3	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. +: 1.5
Volt : 12	+ Shutoff solenoid
Rated speed rpm : 500	† Volt : 12
Rated speed rpm : 500 Supply pomp	Rated speed rpm : 1200
pressure bar : 5.7	Del. quantity
Tolerance bar + : 0.3	cm3/1000 strokes : 30.0
Shutoff solenoid	Tolerance
Volt : 12	+ cm3/1000 str. +: 20.0
	- Check tolerance
OVERFLOW QUANTITY	+ cm3/1000s. + : 20.0
	+ Shutoff solenoid
Rated speed rpm : 1100	+ Volt : 12
Overflow quantity	+
ccm/10s : 152.7	Rated speed rpm : 1100
Tolerance	+ Del. quantity
ccm/10s +: 41.6	+ cm3/1000 strokes : 72.5
	+ Tolerance
Check tolerance	+ cm3/1000 str. +-: 1.5
ccm/10s + : 41.6	+

Check tolerance		→ Tolerance
cm3/1000s. +-	: 3.0	+ cm3/1000 str. +-: 1.5
Shutoff solenoid		+ Check tolerance
Volt	: 12	+ cm3/1000s. + : 1.5
•••	, , ,	Spread
Rated speed rpm	: 600	+ cm3/1000 strokes : 5.0
Del. quantity	. 000	1 11110/1000 30/0/08 . 3.0
cm3/1000 strokes	: 76.0	FULL-LOAD STOP CONTROL LEVER
Tolerance	. 70.0	T TOLL LOAD STOP CONTROL LEVER
cm3/1000 str. +-	: 3.0	Rated speed rpm : 275
Check tolerance	. 5.0	+ Rated speed rpm : 275 + Del. quantity
cm3/1000s. +-	: 5,5	+ cm3/1000 strokes : 1.5
Shutoff solenoid	•	
Volt	: 12	+ Tolerance + cm3/1000 str. +-: 1.5
VOCC	: 12	
Dahad award was	. /00	+ Spread
Rated speed rpm	: 400	+ cm3/1000 strokes : 5.0
Del. quantity	- 70.0	+ Check tolerance
cm3/1000 strokes	: 70.0	+ cm3/1000s. + : 1.5
Tolerance	7.0	+ Spread
cm3/1000 str. +-	: 3.0	+ cm3/1000 strokes : 5.0
Check tolerance		†
cm3/100Cs	: 4.0	+ IDLE DELIVERY
Shutoff solenoid		
Volt	: 12	+ Rated speed rpm : 350
		+ Del. quantity
Rated speed rpm	: 800	† cm3/1000 strokes : 1.5
Del. quantity		+ Tolerance
cm3/1000 strokes	: 77.3	+ cm3/1000 str. $+$: 1.5
Tolerance		† Check tolerance
cm3/1000 str. +-	: 0.5	+ cm3/1000s. $+$: 1.5
Check tolerance		+ Shutoff solenoid
cm3/1000s. +-	: 2.5	+ Volt : 12
Shutoff solenoid		+
Volt	: 12	+
		+
		
MECHANICAL SHUTOF	F	+
		+
Rated speed rom	: 1100	+ START TRANSITION
Del. quantity		+
cm3/1000 strokes	: 1.5	+ Rated speed rpm : 250
Tolerance		+ Del. quantity
cm3/1000 str. +-	: 1.5	+ cm3/1000 strokes : 75.0
Spread		+ Tolerance
cm3/1000 strokes	: 5.0	+ cm3/1000 str. + : 15.0
Check tolerance		+ Shutoff solenoid
cm3/1000s. +-	: 1.5	→ Volt : 12
Spread		+
cm3/1000 strokes	: 5.0	1
Shutoff solenoid		+ Rated speed rpm : 150
Volt	: 12	+ Del. quantity
		+ cm3/1000 strokes : 120.0
ELECTR. SHUTOFF		+ cm3/1000 str. + : 20.0
CONTROL LEVER, ID	LE STOP	+ Shutoff solenoid
Julia Lavelly 100		+ Volt : 12
Rated speed rpm	: 275	1
Del. quantity		
cm3/1000 strokes	: 1.5	ASSEMBLY AND ADJUSTMENT DIMENSIONS
UIID/ 1000 511 01/05	• •••	MODE SET MAN MAGOLIFICAL DELIGIOUS
		1

Dimension K mm	:	3,6
Tolerance mm +-	:	0,1
Dimension KF mm	:	6,4
Tolerance mm +-	:	0,2
MS1 dimension mm	:	1,3
Tolerance mm +-		0,2
SVS dimension mm	•	1,7

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.08.96 Edition Test oil : ISO 4113

Part no. : 3 282 816

Pump designation: VE6/12F1100R373-5B

Customer-spec, information Customer : CDC

: 6 BT 5.9 IND. Motor

TEST BENCH REQUIREMENTS

Calibrating-oil return

temperature °C 45 Tolerance °C

Overflow

0.55restriction mm

0.35 Inlet press. bar : Tolerance bar + : 0.05

Test nozzle holde

: 1 638 901 027 assembly

Opening pressure

250 bar Tolerance bar + :

: 1 680 750 000 Test lines

Outside diameter : 6.00

x inside diameter : 2.00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,85

Tolerance mm +: 0.02(0.06)

Outlet : D

Prestroke

(as of UT) mm : 0,3 +-: 0,02 Tolerance mm

Check

tolerance mm **←**: 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

hPa 1000

Setting mm 1.5 Tolerance mm 0.2

Shutoff solenoid

Valt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 750

Aneroid pressure

1000 hPa

Supply pomp

3.5 pressure bar Tolerance bar + : 0.3

Shutoff solenoid

24 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 81.5

Tolerance

0.5 cm3/1000 str. + :

Spread 4.0

cm3/1000 strokes :

Check tolerance 4.5

cm3/1000s. Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm 500

Del. quantity

cm3/1000 strokes :

66.5

Tolerance

cm3/1000 str. \leftarrow : 0.5

Spread	† Tolerance mm +-: 0.4
cm3/1000 strokes : 9.0 Shutoff solenoid	+ Check + tolerance mm + : 0.7
Volt : 24	+ Shutoff solenoid
Check tolerance cm3/1000s. : 9.0	† Volt : 24
Check tolerance cm3/1000s. : 4.5	Rated speed rpm : 600 Aneroid pressure
	hPa : 1000
IDLE SETTING	+ SV travel mm : 0.8
Rated speed rpm : 530 Del. quantity	Tolerance mm +: 0.4 Check
cm3/1000 strokes : 8.5 Tolerance	tolerance mm +: 0.7 Shutoff solenoid
cm3/1000 str. +-: 2.0 Shutoff solenoid	Volt : 24
Volt : 24 Spread	SUPPLY PUMP PRESSURE CHARACTERISTIC
cm3/1000 strokes : 5.5 Check tolerance	Rated speed rpm : 1100
cm3/1000s. : 7.0	Aneroid pressure hPa : 1000
	+ Supply pomp + pressure bar : 5.0
	+ Tolerance bar + : 0.3
FULL-LOAD SPEED REGULATION	+ Shutoff solenoid + Volt : 24
Rated speed rpm : 1185	+ Rated speed rpm : 600
Pressure hPa : 1000	Aneroid pressure
Del. quantity cm3/1000 strokes : 67.5	hPa : 1000 Supply pomp
Tolerance	pressure bar : 2.9
cm3/1000 str. + : 3.0 Shutoff solenoid	Tolerance bar +: 0.3 Shutoff solenoid
Volt : 24	† Volt : 24
STARTING FUEL DELIVERY	OVERFLOW QUANTITY
Rated speed rpm : 100 Del. quantity	Rated speed rpm : 1150 Aneroid pressure
cm3/1000 strokes : 110.0	+ hPa : 1000
Tolerance cm3/1000 str. ←: 30.0	Overflow quantity ccm/10s : 97.2
Shutoff solenoid Volt : 24	Tolerance +: 41.6
	+ Check tolerance
	ccm/10s +: 41.6 Shutoff solenoid
Thursday of MD Test Copyrights Alle	+ Volt : 24
INJECTION-PUMP TEST SPECIFICATIONS	Rated speed rpm : 500
TIMING DEVICE CHARACTERISTIC	Overflow quantity ccm/10s : 62.5
Rated speed rpm : 1100 Aneroid pressure	+ Tolerance + : 20.8
hPa : 1000	Check tolerance
SV travel mm : 2.6	ccm/10s +: 20.8

Church & and amount	1 Charle talamana
Shutoff solenoid Volt : 24	+ Check tolerance + cm3/1000s. +-: 3.0
VOLU . 24	+ cm3/1000s. +-: 3.0 + Shutoff solenoid
DELIVERY AND BREAKAWAY CHARACTERISTIC	+ Volt : 24
DELIVERY AND BREAKAWAY CHARACTERISTIC	I vott . 24
Rated speed rpm : 1185	Rated speed rpm : 500
Aneroid pressure	Aneroid pressure
hPa : 1000	+ hPa : 1000
Del. quantity	Del. quantity
cm3/1000 strokes : 67.5	cm3/1000 strokes : 85.5
Tolerance	Tolerance
cm3/1000 str. +-: 3.0	- cm3/1000 str. + : 4.0
Check tolerance	Shutoff solenoid
cm3/1000s. + : 6.0	Volt : 24
Shutoff solenoid	I vott : 24
Volt : 24	Rated speed rpm : 750
, E4	Aneroid pressure
Rated speed rpm : 1260	+ hPa : 1000
Aneroid pressure	Del. quantity
hPa : 1000	- cm3/1000 strokes : 81.5
Del. quantity	Tolerance
cm3/1000 strokes : 1.5	- cm3/1000 str. +-: 0.5
Tolerance	+ Check tolerance
cm3/1000 str. + : 1.5	- cm3/1000s. + : 3.0
Check tolerance	Shutoff solenoid
cm3/1000s. +-: 1.5	+ Volt : 24
Shutoff solenoid	I vocc . 24
Volt : 24	
VOCC . 24	MECHANICAL SHUTOFF
Rated speed rpm : 700	T MECHANICAL SHOTOFF
	Pated speed rom · 1100
Aneroid pressure	Rated speed rpm : 1100
Aneroid pressure hPa : 400	+ Aneroid pressure
Aneroid pressure hPa : 400 Del. quantity	Aneroid pressure + hPa : 1000
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5	Aneroid pressure hPa: 1000 Del. quantity
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. +-: 0.5	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. +-: 0.5 Check tolerance	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +-: 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. +-: 0.5 Check tolerance cm3/1000s. +-: 4.5	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. +-: 0.5 Check tolerance cm3/1000s. +-: 4.5 Shutoff solenoid	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +-: 1.5 Check tolerance cm3/1000s. +-: 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. +-: 0.5 Check tolerance cm3/1000s. +-: 4.5	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +-: 1.5 Check tolerance cm3/1000s. +-: 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1060s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1060s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +- : 1.5 Check tolerance cm3/1000s. +- : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1060s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1060s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900 Aneroid pressure	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900 Aneroid pressure hPa : 1000	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900 Aneroid pressure	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 FULL-LOAD STOP CONTROL LEVER
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900 Aneroid pressure hPa : 900 Del. quantity	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 FULL-LOAD STOP CONTROL LEVER Rated speed rpm : 530
Aneroid pressure hPa : 400 Del. quantity cm3/1000 strokes : 76.5 Tolerance cm3/1000 str. + : 0.5 Check tolerance cm3/1000s. + : 4.5 Shutoff solenoid Volt : 24 Rated speed rpm : 1150 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 67.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 3.0 Shutoff solenoid Volt : 24 Rated speed rpm : 900 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm : 530 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 FULL-LOAD STOP CONTROL LEVER Rated speed rpm : 530 Del. quantity

Tolerance cm3/1000 str. + :1.5 Check tolerance cm3/1000s. 1.5 IDLE DELIVERY 500 Rated speed rpm Del. quantity cm3/1000 strokes : 2.0 Tolerance cm3/1000 str. +: 2.0 Check tolerance cm3/1000s. 2.0 Shutoff solenoid Volt 2/4 START TRANSITION Rated speed rpm : 440 Del. quantity cm3/1000 strokes : 65.0 Tolerance cm3/1000 str. +: 15.0 Shutoff solenoid Volt 24 Rated speed rpm 280 Del. quantity 110.0 cm3/1000 strokes : Tolerance cm3/1000 str. +: 30.0 Shutoff solenoid Volt 24 ASSEMBLY AND ADJUSTMENT DIMENSIONS Dimension KF mm : 5,2 Tolerance mm Dimension MS mm : 1,2 Tolerance mm +: 0,2 SVS dimension mm : 2,0 CONTROL LEVER POSITION SET

: 34,8..38,8

Control lever position YB mm : 42,0..47,6

End of test-specification sheet

Control lever position YA mm

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 13.08.96 Test oil : ISO 4113

Part no. : 3 919 004

Pump designation : VE6/12F1150R373-50

Customer-spec. information

Customer : CDC

: 6 BT 5.9 IND. Motor

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C 45 Tolerance °C + :

Overflow

restriction mm 0.55

0.35 Inlet press. bar :

Tolerance bar +-: 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

bar 250 3 Tolerance bar +:

: 1 680 750 000 Test lines

Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,85

Tolerance mm +: 0.02(0.06)

Outlet | : D

Prestroke

(as of UT) mm : 0,3

Tolerance mm +-: 0,02

Check

tolerance mm + : 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

1000 hPa

Setting mm 1.5 0.2

Tolerance mm + : Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 750

Aneroid pressure

1000 hPa

Supply pomp

pressure bar 3.5 0.3

Tolerance bar +:

Shutoff solenoid

Volt 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1000 :

Del. quantity

cm3/1000 strokes : 81.5

Tolerance

cm3/1000 str. ←: 0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

24 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 66.5

Tolerance

0.5 cm3/1000 str. +-:

Spread		+ Tolerance mm +-: 0.4
cm3/1000 strokes	: 9.0	+ Check
Shutoff solenoid Volt	: 24	tolerance mm +: 0.7 Shutoff solenoid
Check tolerance cm3/1000s.	: 9.0	+ Volt : 24
Check tolerance		Rated speed rpm : 600
cm3/1000s.	: 4.5	Aneroid pressure hPa : 1000
IDLE SETTING		+ SV travel mm : 0.8
Rated speed rpm Del. quantity	: 400	Tolerance mm +: 0.4
cm3/1000 strokes	: 11.5	tolerance mm +: 0.7
Tolerance cm3/1000 str. +-	: 2.0	+ Shutoff solenoid + Volt : 24
Shutoff solenoid Volt	: 24	SUPPLY PUMP PRESSURE CHARACTERISTIC
Spread cm3/1000 strokes	: 5.5	+ Rated speed rpm : 1100
Check tolerance cm3/1000s.	: 7.0	+ Aneroid pressure + hPa : 1000
		Supply pomp pressure bar : 5.0
		+ Tolerance bar +: 0.3
FULL-LOAD SPEED R	ECHI ATTON	+ Shutofi solenoid + Volt : 24
		+ Volt : 24
Rated speed rpm Pressure hPa	: 1135 : 1000	Rated speed rpm : 600 Aneroid pressure
Del. quantity cm3/1000 strokes	: 66.0	+ hPa : 1000
Tolerance		+ Supply pomp + pressure bar : 2.9
cm3/1009 str. +- Shutoff solenoid	: 3.0	+ Tolerance bar + : 0.3 + Shutoff solenoid
Volt	: 24	Volt : 24
STARTING FUEL DEL	IVERY	OVERFLOW QUANTITY
Rated speed rpm	: 100	+ Rated speed rpm : 1150
Del. quantity cm3/1000 strokes	: 110.0	Aneroid pressure hPa : 1000
Tolerance		Overflow quantity
cm3/1000 str. +- Shutoff solenoid	: 30.0	+ ccm/10s : 97.2 + Tolerance
Volt	: 24	ccm/10s +: 41.6
		Check tolerance
		+ ccm/10s + : 41.6 + Shutoff solenoid
THIS PATALL NAME OF	OT ODERTETATIONS	+ Volt : 24
INJECTION-PUMP TE	ST SPECIFICATIONS	Rated speed rpm : 500
TIMING DEVICE CHA	RACTERISTIC	Overflow quantity 62.5
Rated speed rpm Aneroid pressure	: 1100	+ Tolerance + ccm/10s +: 20.8
hPa	: 1000	+
SV travel mm	: 2.6	+ Check tolerance + ccm/10s +-: 20.8

Shutoff solenoid Volt : 24	<u> </u>	Shutoff solenoid Volt :	24
DELIVERY AND BREAKAWAY CHARACTER:	15116		
	13/10	Rated speed rpm : Aneroid pressure	
Rated speed rpm : 1185 Aneroid pressure	‡	hPa : Del. quantity	1000
hPa : 1000 Del. quantity	‡	cm3/1000 strokes : Tolerance	82. 5
cm3/1000 strokes : 66.0 Tolerance	<u>‡</u>	<pre>cm3/1000 str. +- : Check tolerance</pre>	1.5
cm3/1000 str. + : 3.0 Check tolerance	<u>†</u>	cm3/1000s. + : Shutoff solenoid	3.0
cm3/1000s. +-: 6.0 Shutoff solenoid	1	Volt :	24
Volt : 24	. }	Rated speed rpm : Aneroid pressure	500
Rated speed riper : 1200	Ŧ	hPa :	1000
Aneroid pressure hPa : 1000	Ŧ	Del. quantity cm3/1000 strokes :	85.5
Del. quantity cm3/1000 strokes : 40.0	‡	Tolerance cm3/1000 str. + :	4.0
Check tolerance cm3/1000s. +: 20.0	‡	Shutoff solenoid Volt :	24
Shutoff solenoid Volt : 24	‡	Rated speed rpm :	750
Rated speed rpm : 1260	‡	Aneroid pressure hPa :	1000
Aneroid pressure hPa : 1000	‡	Del. quantity cm3/1000 strokes :	81.5
Del. quantity cm3/1000 strokes : 1.5	‡	Tolerance cm3/1000 str. +-:	0.5
Tolerance cm3/1000 str. +-: 1.5	1	Check tolerance cm3/1000s. +-:	
Check tolerance cm3/1000s. +-: 1.5	<u>†</u>	Shutoff solenoid Volt :	24
Shutoff solenoid	Ŧ		
	Ŧ	MECHANICAL SHUTOFF	
Rated speed rpm : 700 Aneroid pressure	‡	Rated speed rpm :	1100
hPa : 400 Del. quantity	‡	Aneroid pressure hPa :	1000
cm3/1000 strokes : 76.5 Tolerance	‡	Del. quantity cm3/1000 strokes :	1.5
cm3/1000 str. + : 0.5 Check tolerance	‡	Tolerance cm3/1000 str. +-:	1.5
cm3/1000s. + : 4.5 Shutoff solenoid	‡	Check tolerance cm3/1000s. +-:	1.5
Volt : 24	‡	Shutoff solenoid Volt :	24
Rated speed rpm : 1150 Aneroid pressure	<u> </u>		
hPa : 1000 Del. quantity	<u> </u>	ELECTR. SHUTOFF CONTROL LEVER, IDLE	STOP
cm3/1000 strokes : 77.5	İ	Rated speed rpm :	400
cm3/1000 str. + : 1.5 Check tolerance	Ŧ	Del. quantity cm3/1000 strokes :	
cm3/1000s. +: 3.0	Ţ	CHD/ TOOU SCHORES :	1.)

Tolerance cm3/1000 str. +-: 1.5 Check tolerance cm3/1000s. 1.5 FULL-LOAD STOP CONTROL LEVER 400 Rated speed rpm : Del. awaitity cm3/1500 strokes : 1.5 Tolerance cm3/1000 str. +-:1.5 Check tolerance cm3/1000s. 1.5 IDLE DELIVERY Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 2.0 Tolerance cm3/1000 str. +-: 2.0 Check tolerance cm3/1000s. 2.0 Shutoff solenoid 24 Volt START TRANSITION 440 Rated speed rpm Del. quantity cm3/1000 strokes : 65.0 Tolerance cm3/1000 str. + :15.0 Shuroff solenoid Volt 24 Rated speed rpm 280 Del. quantity cm3/1000 strokes : 110.0 Tolerance 30.0 cm3/1000 str. + :Shutoff solenoid Volt 24 ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm : 5,2
Tolerance mm + : 0,2
Dimension MS mm : 1,2
Tolerance mm + : 0,2
SVS dimension mm : 2,0

CONTROL LEVER POSITION

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 42,0..47,6

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.08.96 Edition Test oil : ISO 4113

: 0 460 426 211 Part no. Pump designation : VE6/12F1250R498

Customer-spec, information Customer : CDC

: 6 BTAA 5.9B Motor

TEST BENCH REQUIREMENTS

Calibrating-oil return

temperature °C Tolerance °C + :

Overflow

restriction mm 0.55

Inlet press. bar : 0.35 Tolerance bar + : 0.05

Test nozzle holde

: 1 688 901 109 assembly

Opening pressure

207 bar Tolerance bar + : 3

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,4

Tolerance mm +: 0,02(0,06)

Outlet : D

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 1000

Aneroid pressure

hPa 1000

Setting mm 1.7 Tolerance mm +-: 0.2

Shutoff solenoid

24 Volt

SUPPLY PUMP PRESSURE

Rated speed rpm 1000

Aneroid pressure

1000

Supply pomp

6.6 pressure bar Tolerance bar + : 0.3

Shutoff solenoid

24 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 850

Aneroid pressure

hPa 100C

Del. quantity

cm3/1000 strokes : 84.5

Tolerance

cm3/1000 str. + :0.5

Spread

cm3/1000 strokes :

Check tolerance

cm3/1000s. 5.0

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 71.0

Tolerance

cm3/1000 str. + :0.5

Spread

cm3/1000 strokes : 5.0

Shutoff solenoid

Volt

24

Check tolerance

cm3/1000s. 6.0

Check tolerance

cm3/1000s. 5.0

IDLE SETTING		+ Aneroid pressure + hPa : 1000 + Shutoff solenoid
Rated speed rpm Del. quantity	: 350	+ Volt : 24
cm3/1000 strokes Tolerance	: 8.0	Rated speed rpm : 450
cm3/1000 str. +- Shutoff solenoid		SV travel mm : 2.4 Tolerance mm +-: 0.5
Volt Spread	: 24	+ Check + tolerance mm +-: 0.7
cm3/1000 strokes Check tolerance	: 5.5	+ Shutoff solenoid + Volt : 24
cm3/1000s.	: 7.0	+ KSB/AFB Volt : 24
		+ Rated speed rpm : 850
FULL-LOAD SPEED R	EGULATION	Aneroid pressure hPa : 1000
Rated speed rpm Pressure hPa Del. quantity	: 1380 : 1000	SV travel mm : 0.7 Tolerance mm + : 0.4 Check
cm3/1000 strokes	: 60.5	tolerance mm +: 0.7 Shutoff solenoid
cm3/1000 str. +- Shutoff solenoid	: 3.0	Volt : 24
Volt	: 24	SUPPLY PUMP PRESSURE CHARACTERISTIC
		T
STARTING FUEL DEL	IVERY	+ Rated speed rpm : 1250 + Ameroid pressure
STARTING FUEL DEL: Rated speed rpm Del. quantity	: 100	Aneroid pressure 1000
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 100 : 85.0	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid	: 100 : 85.0 : 15.0	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +-	: 100 : 85.0	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid	: 100 : 85.0 : 15.0	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.6 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. + Shutoff solenoid	: 100 : 85.0 : 15.0 : 24	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2 Tolerance bar +: 0.3
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Shutoff solenoid Volt	: 100 : 85.0 : 15.0 : 24	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Shutoff solenoid Volt INJECTION-PUMP TES TIMING DEVICE CHAR	: 100 : 85.0 : 15.0 : 24	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2 Tolerance bar +: 0.3 Shutoff solenoid
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Shutoff solenoid Volt INJECTION-PUMP TES TIMING DEVICE CHAI	: 100 : 85.0 : 15.0 : 24 ST SPECIFICATIONS RACTERISTIC	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Shutoff solenoid Volt INJECTION-PUMP TEX TIMING DEVICE CHAR Rated speed rpm Aneroid pressure hPa SV travel mm Tolerance mm +-	: 100 : 85.0 : 15.0 : 24 ST SPECIFICATIONS RACTERISTIC : 1250	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.4 Tolerance bar +: 0.3
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Shutoff solenoid Volt INJECTION-PUMP TEX TIMING DEVICE CHAIR Rated speed rpm Aneroid pressure hPa SV travel mm	: 100 : 85.0 : 15.0 : 24 ST SPECIFICATIONS RACTERISTIC : 1250 : 1000 : 2.4	Aneroid pressure hPa : 1000 Supply pomp pressure bar : 7.5 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 850 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 6.2 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 500 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.4

Rated speed rpm :

500

Rated speed rpm

500

Overflow quantity ccm/10s :	63.8	‡	Aneroid pressure hPa	450
Tolerance ccm/10s +-:	22.2	‡	Del. quantity cm3/1000 strokes :	79.5
Check tolerance ccm/10s + :	22.2	‡	Tolerance cm3/1000 str. +-: Check tolerance	0.5
Shutoff solenoid Volt	24	Ŧ	cm3/1000s. +-: Shutoff solenoid	4.0
Rated speed rpm :		Ŧ	Volt :	24
Aneroid pressure	1000	Ŧ	Rated speed rpm : Aneroid pressure	1250
Overflow quantity ccm/10s :	77.7	1	hPa :	1000
Tolerance ccm/10s +-:	27.7	+	cm3/1000 strokes : Tolerance	84.0
Check tolerance		Ì	cm3/1000 str. + : Check tolerance	1.5
ccm/10s + : Shutoff solenoid	27.7	‡	cm3/1000s. + : Shutoff solenoid	3.0
Volt :	24	ţ	Volt :	24
DELIVERY AND BREAKA		‡	Rated speed rpm : Aneroid pressure	
Rated speed rpm : Aneroid pressure		Ŧ	hPa Del. quantity	1000
hPa : Del. quantity cm3/1000 strokes :	1000 60.5	Ŧ	cm3/1000 strokes : Tolerance cm3/1000 str. +-:	
Tolerance cm3/1000 str. +:		Ŧ	Shutoff solenoid Volt	24
Check tolerance cm3/1000s. +:		1	Rated speed rpm :	
Shutoff solenoid Volt :	24	‡	Aneroid pressure	1000
Rated speed rpm :	1465	‡	Del. quantity cm3/1000 strokes :	84.5
Aneroid pressure hPa :	1000	‡	Tolerance cm3/1900 str. +-:	0.5
Del. quantity cm3/1000 strokes :	20.0	‡	Check tolerance cm3/1000s. +-:	3.0
Check tolerance cm3/1000s. +-: Shutoff solenoid	10.0	Ī	Shutoff solenoid Volt :	24
Volt :	24	1	MECHANICAL SHUTOFF	
Rated speed rpm : Aneroid pressure	1510	1	Rated speed rpm :	1250
hPa : Del. quantity	1000	1	Aneroid pressure hPa	4500
cm3/1000 strokes : Tolerance		‡	Del. quantity cm3/1000 strokes :	1.5
cm3/1000 str. + : Check tolerance		‡	Tolerance cm3/1000 str. +-:	1.5
cm3/1000s. +-: Shutoff solenoid		‡	Check tolerance cm3/1000s. +:	1.5
Volt :	24	Ŧ	Shutoff solenoid Volt :	24
Rated speed rpm :	600	Ť		

ELECTR. SHUTOFF CONTROL LEVER, ID	LE ST	OP .	
Rated speed rpm Del. quantity	:	350	
cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. +-	:	1.5	
Check tolerance cm3/1000s. +-	:	1.5	
FULL-LOAD STOP CO	NTROL	LEVER	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. +-	:	1.5	
IDLE DELIVERY			
Rated speed rpm	:	410	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. +-	:	1.5	
Check tolerance cm3/1000s. +-	:	1.5	
Shutoff solenoid Volt	:	24	
START TRANSITION			
Rated speed rpm Del. quantity	:	240	
cm3/1000 strokes Tolerance	:	80.0	
cm3/1000 str. + Shutoff solenoid	:	15.0	
Volt	:	24	
Rated speed rpm	:	130	
Del. quantity cm3/1000 strokes	:	95.0	
Tolerance	:	20.0	
cm3/1000 str. +- Shutoff solenoid			

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension K mm : 3,7
Tolerance mm + : 0,1
Dimension KF mm : 6,4
Tolerance mm + : 0,2
MS1 dimension mm : 1,35
Tolerance mm + : 0,15
SVS dimension mm : 3,1

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 43,8..49,4

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.08.96 Test oil : ISO 4113

: 3 282 309 Part no.

Pump designation: VE6/12F1250R498B

Customer-spec. information

: CDC Customer

: 6 BTAA 5.9B Motor

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C 45 Tolerance °C +-:

Overflow

restriction mm 0.55 :

Inlet press. bar : 0.35 Tolerance bar +-:

Test nozzle holde

: 1 688 901 109 assembly

Opening pressure

207 Tolerance bar + :

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter: 2.00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,4

Tolerance mm + : 0.02(0.06)

Outlet | : D

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

1000 Rated speed rpm

Aneroid pressure

hPa 1200

1.7 Setting mm Tolerance mm +: 0.2

Shutoff solenoid

Volt 12

SUPPLY PUMP PRESSURE

Rated speed rpm 1000

Aneroid pressure

hPa 1200

Supply pomp

pressure bar 6.6 Tolerance bar +: 0.3

Shutoff solenoid

12 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

750 Rated speed rpm :

Aneroid pressure

hPa 1200

Del. quantity

cm3/1000 strokes : 83.5

Tolerance

cm3/1000 str. +: 0.5

Spread

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 5.0

Shutoff solenoid

12 Volt

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

500 Rated speed rpm :

Del. quantity

65.0 cm3/1000 strokes :

Tolerance

cm3/1000 str. +:0.5

Spread

cm3/1000 strokes : 5.0

Shutoff solenoid

12 Volt

Check tolerance cm3/1000s.

6.0

Check tolerance

cm3/1000s. 5.0

	+ Aneroid pressure
IDLE SETTING	hPa : 1200 + Shutoff solenoid
Rated speed rpm : 350 Del. quantity	Volt : 12
cm3/1000 strokes : 15.0 Tolerance	Rated speed rpm : 450
cm3/1000 str. +-: 2.0 Shutoff solenoid	SV travel mm : 2.4 Tolerance mm + : 0.5
Volt : 12 Spread	Check tolerance mm +: 0.7
cm3/1000 strokes : 5.5 Check tolerance	Shutoff solenoid Volt : 12
cm3/1000s. : 7.0	KSB/AFB Volt : 24
	Rated speed rpm : 850
FULL-LOAD SPEED REGULATION	Aneroid pressure hPa : 1200
The state of the first state of the state of	1 1 200
Rated speed rpm : 1300	SV travel mm : 0.7
Pressure hPa : 1200	+ Tolerance mm +-: 0.4
Del. quantity	+ Check
cm3/1000 strokes : 82.0 Tolerance	tolerance mm +: 0.7 Shutoff solenoid
cm3/1000 str. + : 3.0 Shutoff solenoid	Volt : 12
Volt : 12	SUPPLY PUMP PRESSURE CHARACTERISTIC
STARTING FUEL DELIVERY	Rated speed rpm : 1250 Aneroid pressure
Rated speed rpm : 100	+ hPa : 1200
Del. quantity	† Supply pomp
cm3/1000 strokes : 90.0	+ pressure bar : 7.6
Tolerance cm3/1000 str. + : 15.0	+ Tolerance bar + : 0.3 + Shutoff solenoid
Shutoff solenoid	+ Volt : 12
Volt : 12	Ţ vott . 12
	Rated speed rpm : 850
	+ Aneroid pressure
	+ hPa : 1200
	+ Supply pomp
INJECTION-PUMP TEST SPECIFICATIONS	pressure bar : 6.2 Tolerance bar + : 0.3
ZINCOTION FOR FED OF CCT TOATTONG	+ Shutoff solenoid
TIMING DEVICE CHARACTERISTIC	Volt : 12
Rated speed rpm : 1250 Aneroid pressure	Rated speed rpm : 500 Aneroid pressure
hPa : 1200	+ hPa : 1200 + Supply pomp
SV travel mm : 2.4	+ pressure bar : 4.4
Tolerence mm +-: 0.4	+ Tolerance bar +: 0.3
Check	+ Shutoff solenoid
tolerance mm +: 0.7	+ Volt : 12
Shutoff solenoid Volt : 12	OVERFLOW QUANTITY
Rated speed rpm : 500	Rated speed rpm : 500

Overflow quantity		+	Aneroid pressure		
ccm/10s :	63.8	+	hPa	:	450
Tolerance		1	Del. quantity		
ccm/10s +-:	22.2	1	cm3/1000 strokes		81.5
CCIII/ 105 .	£6.6	T		•	01.5
		+	Tolerance		
Check tolerance		+	cm3/1000 str. +-	:	0.5
ccm/10s + :	22. 2	+	Check tolerance		
Shutoff solenoid		1	cm3/1000s. +-	•	4.0
	12	- T		•	4.0
Volt :	12	†	Shutoff solenoid		
		+	Volt	:	12
Rated speed rpm :	1250	+			
Aneroid pressure		1	Rated speed rpm	: 12	50
hPa :	1200	1	Aneroid pressure	• 14-	30
	1200	T			4000
Overflow quantity	-	+	hPa	:	1200
ccm/10s :	77.7	+	Del. quantity		
Tolerance		+	cm3/1000 strokes	:	83. 5
ccm/10s +:	27.7	1	Tolerance		
COM/ 103	2111	1	cm3/1000 str. +		1 5
		Ť		•	1.5
Check tolerance	_	+	Check tolerance		
ccm/10s + :	27.7	+	cm3/1000s. +-	:	3.0
Shutoff solenoid		+	Shutoff solenoid		
Volt :	12	1	Volt	•	12
,	12	Ţ	VOCC	•	12
		+		_	
DELIVERY AND BREAKAWAY	Y CHARACTERISTIC	+	Rated speed rpm	: 5	00
		+	Aneroid pressure		
Rated speed rpm :	1300	1	hPa	:	1200
Aneroid pressure	7000	1.		•	.200
	4200	T	Del. quantity		22. 2
hPa :	1200	-Î-	cm3/1000 strckes	: '	92.0
Del. quantity		+	Tolerance		
cm3/1000 strokes :	8 2.0	+	cm3/1000 str. +-	:	5.0
Tolerance		1	Shutoff solenoid	•	
	7.0	T			40
cm3/1000 str. + :	3.0	†	Volt	•	12
Check tolerance		+			
cm3/1000s.	6.0	+	Rated speed rpm	: 7	50
Shutoff solenoid		1	Aneroid pressure		
Volt :	12	1	hPa		1200
,	16	Т		•	1200
		3	And managed and a		
		+	Del. quantity		
Rated speed rpm :	1465	‡	cm3/1000 strokes	:	83.5
	1465	†	cm3/1000 strokes	:	83.5
Aneroid pressure		†	cm3/1000 strokes Tolerance		
Aneroid pressure :	1465 1200	†	cm3/1000 strokes Tolerance cm3/1000 str. +-		83.5 0.5
Aneroid pressure hPa : Del. quantity	1200	++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance		0.5
Aneroid pressure hPe : Del. quantity cm3/1000 strokes :		+ + + + + + + + + + + + + + + + + + + +	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-		
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance	1200 20.0	† † † † † † †	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid		0.5 3.0
Aneroid pressure hPe : Del. quantity cm3/1000 strokes :	1200	+++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-		0.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-:	1200 20.0	++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid		0.5 3.0
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid	1200 20.0 10.0	++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid		0.5 3.0
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-:	1200 20.0	++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt	:	0.5 3.0
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt :	1200 20.0 10.0 12	++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid	:	0.5 3.0
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm :	1200 20.0 10.0	++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF	•	0.5 3.0 12
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt :	1200 20.0 10.0 12	+++++++++++++++++++++++++++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF	:	0.5 3.0 12
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure	1200 20.0 10.0 12 1510	++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm	•	0.5 3.0 12
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa :	1200 20.0 10.0 12	+++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure	: : :	0.5 3.0 12 50
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. + : Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity	1200 20.0 10.0 12 1510 1200	+++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa	: : :	0.5 3.0 12
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. + : Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes :	1200 20.0 10.0 12 1510	+++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity	: : :	0.5 3.0 12 50 1200
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance	1200 20.0 10.0 12 1510 1200 1.5	+++++++++++++++++++++++++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: : :	0.5 3.0 12 50
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. + : Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes :	1200 20.0 10.0 12 1510 1200	**************	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity	: : :	0.5 3.0 12 50 1200 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-:	1200 20.0 10.0 12 1510 1200 1.5	++++++++++++++++++++++++++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	: : : : 12	0.5 3.0 12 50 1200 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance	1200 20.0 10.0 12 1510 1200 1.5	++++++++++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +-	: : : : 12	0.5 3.0 12 50 1200
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-:	1200 20.0 10.0 12 1510 1200 1.5	+++++++++++++++++++++++++++++++++++++	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance	: : : : :	0.5 3.0 12 50 1200 1.5 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	1200 20.0 10.0 12 1510 1200 1.5 1.5	******************************	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-	: : : : :	0.5 3.0 12 50 1200 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-:	1200 20.0 10.0 12 1510 1200 1.5	*******************	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid	: : : : :	0.5 3.0 12 50 1200 1.5 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	1200 20.0 10.0 12 1510 1200 1.5 1.5	******************	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +-	: : : : :	0.5 3.0 12 50 1200 1.5 1.5
Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Check tolerance cm3/1000s. +-: Shutoff solenoid Volt : Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. +-: Check tolerance cm3/1000s. +-: Shutoff solenoid	1200 20.0 10.0 12 1510 1200 1.5 1.5	******************	cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid Volt MECHANICAL SHUTOFF Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 str. +- Check tolerance cm3/1000s. +- Shutoff solenoid	: : : : :	0.5 3.0 12 50 1200 1.5 1.5

CONTROL LEVER, ID	rc 21	UP
Rated speed rpm	:	350
Del. quantity cm3/1000 strokes		1.5
Tolerance	•	1.5
cm3/1000 str. +	:	1.5
Check tolerance cm3/1000S. +-	:	1.5
FULL-LOAD STOP CO	NTROL	LEVER
	:	350
Del. quentity cm3/1090 strokes	:	1.5
Tolerance cm3/1000 str. +	:	1.5
IDLE DELIVERY		
Rated speed rpm Del. quantity	:	410
cm3/1000 strokes Tolerance	:	1.5
cm3/1000 str. + Check tolerance	:	1.5
cm3/1000s. +- Shutoff solenoid	:	1.5
Volt	:	12
07407 704NC7770N		
START TRANSITION Rated speed rpm	:	240
Del. quantity	•	
cm3/1000 strokes	:	80.0
Tolerance cm3/1000 str. + Shutoff solenoid	:	15.0
Volt	*	12
Rated speed rpm	:	130
Del quantity		
cm3/1000 strokes Tolerance	:	95.0
cm3/1000 str. +	:	20.0
Shutoff solenoid		12
Volt	:	12

Dimension K mm : 3,7
Tolerance mm + : 0,1
Dimension KF mm : 6,4
Tolerance mm + : 0,2
MS1 dimension mm : 1,35
Tolerance mm + : 0,15
SVS dimension mm : 3,1

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 43,8..49,6

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.08.96 Test oil : ISO 4113

Part no. : 3 282 306

Pump designation: VE6/12F1250R498C

Customer-spec, information : CDC Customer

Motor : 6 BTAA 5.9B

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature *C Tolerance *C +-:

Overflow

restriction mm 0.55

Inlet press. bar : 0.35 Tolerance bar +-: 0.05

Test nozzle holde

assembly : 1 688 901 109

Opening pressure

207 bar Tolerance bar + :

Test Lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter: 2.00 x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,4

Tolerance mm +: 0.02(0.06)

Outlet | : D

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 1000

Aneroid pressure

hPa 1200

1.7 Setting mm Tolerance mm + : 0.2

Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 1000

Aneroid pressure

hPa 1200

Supply pomp

pressure bar 6.6 Tolerance bar + : 0.3

Shutoff solenoid

Volt 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1200

Del. quantity

cm3/1000 strokes : 83.5

Tolerance

cm3/1000 str. +-: 0.5

Spread

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.5.0

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm 500

Del. quantity

cm3/1000 strokes : 65.1

Tolerance

cm3/1000 str. + :0.5

Spread

cm3/1000 strokes : 5.0

Shutoff solenoid

Volt 24

Check tolerance

cm3/1000s.6.0

Check tolerance

cm3/1000s.5.0

		+ Aneroid pressure
IDLE SETTING		hPa : 1200
1000 00111110		+ Shutoff solenoid
Rated speed rpm	: 350	+ Volt : 24
Del. quantity		}
cm3/1000 strokes	: 15.0	Rated speed rpm : 450
Tolerance		†
cm3/1000 str. +-	: 2.0	+ SV travel mm : 2.4
Shutoff solenoid Volt	: 24	+ Tolerance mm + : 0.5 + Check
Spread	. 64	tolerance mm +: 0.7
cm3/1000 strokes	: 5.5	+ Shutoff solenoid
Check tolerance	• • • • • • • • • • • • • • • • • • • •	+ Volt : 24
cm3/1000s.	: 7.0	+
		KSB/AFB Volt : 24
		+
		+ Rated speed rpm : 850
FULL LOAD COFFE D	ECH ATTON	Aneroid pressure
FULL-LOAD SPEED R	EGULATION	hPa : 1200
Rated speed rpm	: 1300	SV travel mm : 0.7
Pressure hPa	: 1200	Tolerance mm +: 0.4
Del. quantity		+ Check
cm3/1000 strokes	: 82.0	tolerance mm + : 0.7
Tolerance		+ Shutoff solenoid
cm3/1000 str. +	: 3.0	† Volt : 24
Shutoff solenoid	. 2/	CURRILY CURR COFFICIENT CHARACTER TOTAL
Volt	: 24	SUPPLY PUMP PRESSURE CHARACTERISTIC
STARTING FUEL DEL	IVERY	Rated speed rpm : 1250
01711110110110202	2 4 5	+ Aneroid pressure
Rated speed rpm	: 100	hPa : 1200
Del. quantity		+ Supply pomp
cm3/1000 strokes	: 90.0	+ pressure bar : 7.6
Tolerance	45.5	+ Tolerance bar + : 0.3
cm3/1000 str. +	: 15.0	+ Shutoff solenoid
Shutoff solenoid	. 2/	+ Volt : 24
Volt	: 24	Rated speed rpm : 850
		Aneroid pressure
		+ hPa : 1200
		- Supply pomp
		- + pressure bar : 6.2
INJECTION-PUMP TE	ST SPECIFICATIONS	† Tolerance bar + : 0.3
		+ Shutoff solenoid
TIMING DEVICE CHA	RACTERISTIC	+ Volt : 24
Dated speed spe	: 1250	+ Rated speed rpm : 500
Rated speed rpm Aneroid pressure	1230	+ Rated speed rpm : 500 + Aneroid pressure
hPa	: 1200	hPa : 1200
· i. u	7.000	- Supply pomp
SV travel mm	: 2.4	pressure bar : 4.4
Tolerance mm +	: 0.4	+ Tolerance bar + : 0.3
Check		+ Shutoff solenoid
tolerance mm +-	: 0.7	† Volt : 24
Shutoff solenoid	: 24	OVEREI OU OUANTITY
Volt	. 44	OVERFLOW QUANTITY
Rated speed rpm	: 500	Rated speed rpm : 500
		The second secon

Overflow quantity ccm/10s : 63.8	+ Aneroid pressure + hPa : 460
Tolerance ccm/10s +: 22.2	<pre>Del. quantity cm3/1000 strokes : 81.5</pre>
Check tolerance	+ Tolerance + cm3/1000 str. + : 0.5
ccm/10s +-: 22.2 Shutoff solenoid Volt : 24	+ Check tolerance + cm3/1000S. +-: 4.0 + Shutoff solenoid
Rated speed rpm : 1250	Volt : 24
Aneroid pressure hPa : 1200	Rated speed rpm : 1250 Aneroid pressure
Overflow quantity ccm/10s : 77.7	hPa : 1200 - Del. quantity
Tolerance ccm/10s +: 27.7	cm3/1000 strokes : 83.5 Tolerance
Check tolerance	cm3/1000 str. +: 1.5 Check tolerance
ccm/10s +·: 27.7 Shutoff solenoid	+ cm3/1000s. + : 3.0 Shutoff solenoid
Volt : 24	† Volt : 24
DELIVERY AND BREAKAWAY CHARACTERISTIC Rated speed rpm : 1300	+ Rated speed rpm : 500 + Aneroid pressure + hPa : 1200
Aneroid pressure	Del. quantity 92.0
Del. quantity cm3/1000 strokes : 82.0	Tolerance
Tolerance cm3/1000 str. +: 3.0	+ Shutoff solenoid + Volt : 24
Check tolerance cm3/1000s. +-: 6.0	Rated speed rpm : 750
Shutoff solenoid Volt : 24	+ Aneroid pressure + hPa : 1200
Rated speed rpm : 1465 Aneroid pressure	+ Del. quantity + cm3/1000 strokes : 83.5 + Tolerance
hPa : 1200 Del. quantity	cm3/1000 str. +: 0.5 Check tolerance
cm3/1000 strokes : 20.0 Check tolerance	cm3/1000s. +: 3.0 Shutoff solenoid
cm3/1000s. +-: 10.0 Shutoff solenoid	+ Voit : 24
Volt : 24	MECHANICAL SHUTOFF
Rated speed rpm : 1510 Aneroid pressure hPa : 1200	Rated speed rpm : 1250 Aneroid pressure
Del. quantity cm3/1000 strokes : 1.5	hPa : 1200 Del. quantity
Tolerance cm3/1000 str. +: 1.5	- cm3/1000 strokes : 1.5 Tolerance
Check tolerance cm3/1000s. +: 1.5	cm3/1000 str. +-: 1.5 Check tolerance
Shutoff solenoid Volt : 24	+ cm3/1000s. +-: 1.5 Shutoff solenoid
Rated speed rpm : 500	+ Volt : 24

ELECTR. SHUTOFF CONTROL LEVER, ID	LE S	ТОР	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	1.5	
Folerance cm3/1000 str. +-	:	1.5	
Check tolerance cm3/1000s. +	:	1.5	
FULL-LOAD STOP CO	NTRO	L LEVER	
Rated speed rpm	:	350	
Del. quantity cm3/1000 strokes	:	1.5	
Folerance cm3/1000 str. +-	:	1.5	
IDLE DELIVERY			
Rated speed rpm	:	410	
Del. quantity cm3/1000 strokes	:	1.5	
Tolerance cm3/1000 str. ←	:	1.5	
Check tolerance cm3/1000s. +-	:	1.5	
Shutoff solenoid /olt	:	24	
START TRANSITION			
Rated speed rpm Del. quantity	:	240	
cm3/1000 strokes	:	80.0	
cm3/1000 str. +-	:	15.0	
olt	:	24	
Rated speed rpm	:	130	
Pel. quantity	:	95.0	
00	-		
Tolerance cm3/1000 str. +-	:	20.0	

Dimension K mm	: 3,7
	: 0,1
Dimension KF mm	: 6,4
Tolerance mm +-	: 0,2
	: 1,35
Tolerance mm +-	: 0,15
SVS dimension mm	: 3,1

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 43,8..49,6

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.08.96 Edition Test oil : ISO 4113

: 3 917 038 Part no.

Pump designation : VE6/12F1250R373-3A

Customer-spec. information : CDC Customer

Motor : 6 BTA-590

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar + : 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 Tolerance bar + :

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm : 1,85

Tolerance mm +: 0.02(0.06)

Outlet : D

Prestroke

(as of UT) mm: 0.3 Tolerance mm + : 0,02

Check

tolerance mm +: 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

hPa 1000

Setting mm 1.6 Tolerance mm + : 0.2

SUPPLY PUMP PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1000

Supply pomp

pressure bar 3.5

Tolerance bar + : 0.3

FULL-LOAD DELIVERY WITH BOOST PRESSURE

750 Rated speed rpm

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 82.5

Tolerance

cm3/1000 str. + : 0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 40.5

Tolerance

cm3/1000 str. +: 0.5

Check tolerance

cm3/1000s. 4.5

IDLE SETTING

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes : 6.0

Tolerance

cm3/1000 str. +-:2.0

Spread

cm3/1000 strokes : 5.5

Check tolerance cm3/1000s. : 7.0	Aneroid pressure hPa : 1000 Supply pomp
	pressure bar : 2.4
T	
Ť	Tolerance bar + : 0.3
FULL-LOAD SPEED REGULATION	OVERFLOW QUANTITY
Rated speed rpm : 1300	Rated speed rpm : 1250
Pressure hPa : 1000	Aneroid pressure
Del. quantity	hPa : 1000
cm3/1000 strokes : 68.0	Overflow quantity
Tolerance	ccm/10s : 97.2
cm3/1000 str. +-: 3.0	Tolerance
OTANTANO PURI ARI TURNA	ccm/10s +: 41.6
STARTING FUEL DELIVERY	
100	Check tolerance
Rated speed rpm : 100	ccm/10s +-: 41.6
Del. quantity	
cm3/1000 strokes : 95.0 +	Rated speed rpm : 500
Tolerance	Overflow quantity
cm3/1000 str. + : 25.0 +	ccm/10s : 62.5
+	Tolerance
+	ccm/10s +-: 20.8
+	
+	Check tolerance
	ccm/10s +-: 20.8
INJECTION-PUMP TEST SPECIFICATIONS +	
+	DELIVERY AND BREAKAWAY CHARACTERISTIC
	ACCTACH MAD CHEMONALL CHANGE LITE 170
TIMING DEVICE CHARACTERISTIC +	PECTACH PAR CHEMICANT CHANGE (120120
TIMING DEVICE CHARACTERISTIC	Rated speed rpm : 1300
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050	Rated speed rpm : 1300
Rated speed rpm : 1050	Rated speed rpm : 1300 Aneroid pressure
+	Rated speed rpm : 1300 Aneroid pressure hPa : 1000
Rated speed rpm : 1050 Aneroid pressure	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity
Rated speed rpm : 1050 Aneroid pressure hPa : 1000	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. +: 3.0 Check tolerance cm3/1000s. +: 6.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. +: 3.0 Check tolerance cm3/1000s. +-: 6.0 Rated speed rpm : 1330
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4 Check	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.4 Check tolerance mm +: 0.7	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4 Check	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.6	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm + : 0.4 Check tolerance mm + : 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.6 Tolerance bar +: 0.3	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.6 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Check tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.6	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.0 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 2.7 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 Rated speed rpm : 600 Aneroid pressure hPa : 1000 SV travel mm : 0.8 Tolerance mm +: 0.4 Check tolerance mm +: 0.7 SUPPLY PUMP PRESSURE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.6 Tolerance bar +: 0.3	Rated speed rpm : 1300 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 68.0 Tolerance cm3/1000 str. + : 3.0 Check tolerance cm3/1000s. + : 6.6 Rated speed rpm : 1330 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 35.0 Check tolerance cm3/1000s. + : 20.0 Rated speed rpm : 1400 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 strokes : 1.5 Check tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5

Aneroid pressure hPa : Del. quantity	450	IDLE DELIVERY
cm3/1000 strokes : Tolerance	67.5	Rated speed rpm : 500
cm3/1000 str. +-: Check tolerance cm3/1000s. +-:	0.5 + 4.5	Del. quantity cm3/1 000 strokes : 2.0 Tolerance
Rated speed rpm :	1250	cm3/1000 str. + : 2.0 Check tolerance
Aneroid pressure hPa :	1000	cm3/1000s. +-: 2.0
Del. quantity cm3/1000 strokes :	76.0	
Tolerance cm3/1000 str. +-: Check tolerance	1.5	
cm3/1000s. +-:	3.0	START TRANSITION
Rated speed rpm : Ameroid pressure	1050	Rated speed rpm : 420 Del. quantity
hPa : Del. quantity	1000	cm3/1000 strokes : 40.0 Tolerance
<pre>cm3/1000 strokes : Tolerance cm3/1000 str. +-:</pre>	1.5	cm3/1000 str. ← : 20.0
Check tolerance cm3/1909s. +-:	3.0	Rated speed rpm : 240 Del. quantity
Rated speed rpm :	500	cm3/1000 strokes : 100.0 Tolerance
Aneroid pressure hPa : Del. quantity	1000	cm3/1000 str. +-: 25.0
cm3/1000 strokes : Tolerance	82.5	ASSEMBLY AND ADJUSTMENT DIMENSIONS
cm3/1000 str. +-:	4.0	Dimension KF mm : 5,2
	+	Tolerance mm + : 0,2
Rated speed rpm : Aweroid pressure	750	MS1 dimension mm : 1,65 Tolerance mm +-: 0,15
Ameroid pressure hPa : Del. quantity	750	MS1 dimension mm : 1,65
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + :	750	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance	750 1000 82.5	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance	750 1000 82.5 0.5	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance cm3/1000s. + : MECHANICAL SHUTOFF Rated speed rpm :	750 1000 82.5 0.5	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION SET Control lever
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance cm3/1000s. + : MECHANICAL SHUTOFF Rated speed rpm : Aneroid pressure hPa : Del. quantity	750 1000 82.5 0.5 3.0	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance cm3/1000s. + : MECHANICAL SHUTOFF Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance	750 1000 82.5 0.5 3.0 1250 1000 1.5	MS1 dimension mm : 1,65 Tolerance rm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever position YB mm : 42,748,1
Averoid pressure hPa : Del. quantity cm3/1000 strokes : Tolerance cm3/1000 str. + : Check tolerance cm3/1000s. + : MECHANICAL SHUTOFF Rated speed rpm : Aneroid pressure hPa : Del. quantity cm3/1000 strokes :	750 1000 82.5 0.5 3.0	MS1 dimension mm : 1,65 Tolerance mm + : 0,15 SVS dimension mm : 1,8 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.08.96 Test oil : ISO 4113

Part no. : 3 921 244

Pump designation: VE6/12F1100R373-5B

Customer-spec. information Customer : CDC

: 6 BT 5.9 IND. Motor

TEST BENCH REQUIREMENTS

Calibrating-oil

return

temperature °C 45 Tolerance °C + :

Overflow

restriction mm 0.55 :

Inlet press. bar : 0.35 Tolerance bar + : 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

bar 250 Tolerance bar + :

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm : 1,85

Tolerance mm +: 0,02(0,06)

Outlet : D

Prestroke

(as of UT) mm : 0,3 Tolerance mm + : 0.02

Check

tolerance mm +: 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

750 Rated speed rpm

Aneroid pressure

hPa 1000

Setting mm 1.5 Tolerance mm +-: 0.2

Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1000

Supply pomp

pressure bar 3.5 Tolerance bar + : 0.3

Shutoff solenoid

Volt 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm 750

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 81.5

Tolerance

cm3/1000 str. +-:0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

500 Rated speed rpm

Del. quantity

cm3/1000 strokes :

66.5

Tolerance

cm3/1000 str. +-:

0.5

Spread		+ Tolerance mm +-: 0.4
cm3/1000 strokes	; 9.0	+ Check
Shutoff solenoid		tolerance mm + : 0.7
Volt	; 24	+ Shutoff solenoid
Check tolerance	6.6	+ Volt : 24
cm3/100GS.	: 9.0	† District and the second second
Check tolerance cm3/1000s.	: 4.5	Rated speed rpm : 600
Chor Todos.	: 4.5	+ Aneroid pressure + hPa : 1000
IDLE SETTING		I 1174 . 1000
1010 00111110		SV travel mm : 0.8
Rated speed rpm	: 400	+ Tolerance mm +-: 0.4
Del. quantity		Check
cm3/1000 strokes	: 11.0	tolerance mm +: 0.7
Tolerance		+ Shutoff solenoid
cm3/1000 str. +	2.0	+ Volt : 24
Shutoff solenoid		- CURRING BREAKING CHARLES
Volt	: 24	+ SUPPLY PUMP PRESSURE CHARACTERISTIC
Spread cm3/1000 strokes	: 5.5	Rated speed rpm : 1100
Check tolerance		+ Rated speed rpm : 1100 + Aneroid pressure
cm3/1000s.	: 7.0	hPa : 1000
		+ Supply pomp
		pressure bar : 5.0
		† Tolerance bar + : 0.3
		+ Shutoff solenoid
FULL-LOAD SPEED R	EGULATION	+ Volt : 24
	4405	
Rated speed rpm	: 1185	+ Rated speed rpm : 600
Pressure hPa	: 1000	+ Aneroid pressure + hPa : 1000
Del. quantity cm3/1000 strokes	: 66.0	+ Supply pomp
Tolerance	. 00.0	pressure bar : 2.9
cm3/1000 str. +-	3.0	Tolorance bar +: 0.3
Shutoff solenoid		+ Shutoff solenoid
Volt	: 24	+ Volt : 24
		+
STARTING FUEL DEL	IVERY	+ OVERFLOW QUANTITY
maked a real are	400	Detail on the second
Rated speed rpm	: 100	Rated speed rpm : 1150
Del. quantity cm3/1000 strokes	: 110.0	+ Aneroid pressure + hPa : 1000
Tolerance	. 110.0	Overflow quantity
cm3/1000 str. +	: 30.0	ccm/10s : 97.2
Shutoff solenoid		+ Tolerance
Volt	: 24	+
		†
		+ Check tolerance
		+ ccm/10s + : 41.6
		+ Shutoff solenoid
THIECTICAL DIMO TO	ST SPECIFICATIONS	- † Volt : 24
THACCITON-LOUS IC	OF SECTIONAL TOURS	Rated speed rpm : 500
TIMING DEVICE CHA	RACTERISTIC	Overflow quantity
	· · · · · · · · · · · · · · · · · · ·	+ ccm/10s : 62.5
Rated speed rpm	: 1100	Tolerance
Aneroid pressure		+ ccm/10s + : 20.8
hPa	: 1000	+
	• •	+ Check tolerance
SV travel mm	: 2.6	+

Shutoff solenoid Volt : 24	check tolerance cm3/1000s. +: 3.0
DELIVERY AND BREAKAWAY CHARACTERIST	Shutoff solenoid IC Volt : 24
Rated speed rpm : 1185 Aneroid pressure	Rated speed rpm : 500 Aneroid pressure
hPa : 1000 Del. quantity	hPa : 1000 Del. quantity
cm3/1000 strokes : 66.0 Tolerance	cm3/1000 strokes : 85.5
cm3/1000 str. +-: 3.0 Check tolerance	cm3/1000 str. +: 4.0 Shutoff solenoid
cm3/1000s. + : 6.0 Shutoff solenoid	Volt : 24
Volt : 24	Rated speed rpm : 750 Aneroid pressure
Rated speed rpm : 1260 Aneroid pressure	hPa : 1000 + Del. quantity
hPa : 1000 Del. quantity	+ cm3/1000 strokes : 81.5 + Tolerance
cm3/1000 strokes : 1.5 Tolerance	cm3/1000 str. + : 0.5 Check tolerance
cm3/1000 str. +: 1.5 Check tolerance	+ cm3/1000s. + : 3.0 Shutoff solenoid
cm3/1000S. + : 1.5 Shutoff solenoid Volt : 24	+ Volt : 24
Volt : 24 Rated speed rpm : 700	MECHANICAL SHUTOFF
Aneroid pressure hPa : 400	Rated speed rpm : 1100 Aneroid pressure
Del. quantity cm3/1000 scrokes : 76.5	hPa : 1000 + Del. quantity
Tolerance cm3/1000 str. + : 0.5	cm3/1000 strokes : 1.5 Tolerance
Check tolerance cm3/1000S. +-: 4.5	+ cm3/1000 str. + : 1.5 + Check tolerance
Shutofî solenoîd Volt : 24	+ cm3/1000s. +-: 1.5 Shutoff solenoid
Rated speed rpm : 1150	+ Volt : 24
Aneroid pressure hPa : 1000 Del. quantity	ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
cm3/1000 strokes : 77.5 Tolerance	Rated speed rpm : 400
cm3/1000 str. + : 1.5 Check tolerance	Del. quantity cm3/1000 strokes : 1.5
cm3/1000S. +: 3.0 Shutoff solenoid	+ Tolerance + cm3/1000 str. + : 1.5
Volt : 24	+ Check tolerance + cm3/1000S. + : 1.5
Rated speed rpm : 900 Aneroid pressure	FULL-LOAD STOP CONTROL LEVER
hPa : 1000 Del. quantity cm3/1000 strokes : 83.5	Rated speed rpm : 400
<pre>cm3/1000 strokes : 83.5 Tolerance cm3/1000 str. +-: 1.5</pre>	Del. quantity cm3/1000 strokes : 1.5
	•

Tolerance cm3/1000 str. +-:1.5 Check tolerance cm3/1000s. 1.5 IDLE DELIVERY

500 Rated speed rpm : Del. quantity

cm3/1000 strokes : 2.0 Tolerance

cm3/1000 str. +-:2.0 Check tolerance cm3/1000s. 2.0

Shutoff solenoid Volt 24

START TRANSITION

Rated speed rpm : 440 Del. quantity

65.0 cm3/1000 strokes : Talerance

cm3/1000 str. +-: 15.0

Shutoff solenoid

24 Volt

Rated speed rpm 280

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 str. +-:30.0

Shutoff solenoid

24 Volt

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm +-: 0,2 Tolerance mm : 1,2 Dimension MS mm +: 0,2 Tolerance mm SVS dimension mm : 2,0

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8 Control lever

: 42,0..47,6 position YB mm

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 16.08.96 Edition Test oil : ISO 4113

: 3 916 920 Part no.

Pump designation : VE6/12F1150R381-7A

Customer-spec. information Customer : CUMMINS

: 6BT- 5.9 IND. Motor

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press, ber 0.35 Tolerance bar + : 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 Tolerance bar ←:

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 840 × length mm :

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,5

Tolerance mm +: 0.02(0.06)

Outlet : D

Prestroke

(as of UT) mm : 0.3 Tolerance mm +-: 0,02

Check

tolerance mm + : 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

750 Rated speed rpm :

Setting mm 3.6 Tolerance mm + : 0.2

Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm : 750

Supply pomp

4.0 pressure bar Tolerance bar + : 0.3

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 73.5

Tolerance

cm3/1000 str. + : 0.5

Spread

cm3/1000 strokes : 4.0

Shutoff solenoid

Volt 24

IDLE SETTING

Rated speed rpm 375

Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 str. ←: 3.0

Shutoff solenoid

Volt 24

Spread

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 7.0

FULL-LOAD SPEED REGULATION

Del quantity	† <u> </u>
cm3/1000 strokes : 49.5	+ Rated speed rpm : 1050
Tolerance	+ Overflow quantity
cm3/1000 str. +: 3.0	+ ccni/10s : 97.2
Shutoff solenoid	+ Tolerance
Volt : 24	+ ccm/10s +-: 41.6
	+
STARTING FUEL DELIVERY	+ Check tolerance
	+ ccm/10s +: 41.6
Rated speed rpm : 100	+ Shutoff solenoid
Del. quantity	+ Volt : 24
cm3/1000 strokes : 90.0	+
Tolerance	+ Rated speed rpm : 500
cm3/1000 str. +-: 30.0	† Overflow quantity
Shutoff solenoid	+ ccm/10s : 62.5
Volt : 24	+ Tolerance
	+ ccm/10s + : 20.8
	+
	+ Check tolerance
	+ ccm/10s $+$: 20.8
	+ Shutoff solenoid
INJECTION-PUMP TEST SPECIFICATIONS	+ Volt : 24
	+
TIMING DEVICE CHARACTERISTIC	+ DELIVERY AND BREAKAWAY CHARACTERISTIC
	+
Rated speed rpm : 1050	+ Rated speed rpm : 1150
	+ Del. quantity
SV travel mm : 5.4	+ cm3/1000 strukes : 49.5
Tolerance mm +-: 0.4	+ Tolerance
Check	+ cm3/1000 str. $+$: 3.0
tolerance mm + : 0.7	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. $+$: 6.0
Volt : 24	+ Shutoff solenoid
	+ Volt : 24
Rated speed rpm : 500	+
	+ Rated speed rpm : 1130
SV travel mm : 1.7	+ Del. quantity
Tolerance mm ←: 0.4	+ cm3/1000 strokes : 30.0
Check	† Check tolerance
tolerance mm +: 0.7	+ cm3/1000s. + : 15.0
Shutoff solenoid	+ Shutoff solenoid
Volt : 24	+ Volt : 24
	+
SUPPLY PUMP PRESSURE CHARACTERISTIC	Rated speed rpm : 1200
	+ Del. quantity
Rated speed rpm : 1050	+ cm3/1000 strokes : 1.5
Supply pomp	+ Tolerance
pressure bar : 5.2	+ cm3/1000 str. +: 1.5
Tolerance bar + : 0.3	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. +: 1.5
Volt : 24	- Shutoff solenoid
	+ Volt : 24
Rated speed rpm : 500	+
Supply pomp	+ Rated speed rpm : 1050
pressure bar : 2.9	+ Del. quantity
Tolerance bar +: 0.3	+ cm3/1000 strokes : 70.5
Shutoff solenoid	+ Tolerance
Volt : 24	+ cm3/1000 str. + : 1.5
	+ Check tolerance
OVERFLOW QUANTITY	+ cm3/1000s. $+$: 3.0

Shutoff solenoid	+
Volt : 24	Rated speed rpm : 450
	+ Del. quantity
Rated speed rpm : 900	+ cm3/1000 strokes : 2.0
Del. quantity	+ Tolerance
cm3/1000 strokes : 73.5 Tolerance	+ cm3/1000 str. +-: 2.0 + Check tolerance
cm3/1000 str. +-: 2.0	- cm3/1000s. +-: 2.0
Check tolerance	+ Shutoff solenoid
cm3/1000s. + : 4.0	+ Volt : 24
Shutoff solenoid	+
Volt : 24	†
Rated speed rpm : 500	Ī
Del. quantity	1
cm3/1000 strokes : 58.0	1
Tolerance	START TRANSITION
cm3/1000 str. +: 4.0	†
Check tolerance cm3/1000S. +: 6.0	Rated speed rpm : 240
Shutoff solenoid	+ Del. quantity + cm3/1000 strokes : 45.0
Volt : 24	+ Tolerance
	cm3/1000 str. + : 15.0
Rated speed rpm : 750	+ Shutoff solenoid
Del. quantity	+ Volt : 24
cm3/1000 strokes : 73.5 Tolerance	1
cm3/1000 str. →: 0.5	Rated speed rpm : 130
Check tolerance	Del. quantity
cm3/1000s. +-: 3.0	+ cm3/1000 strokes : 100.0
Shutoff solenoid	† Tolerance
Volt : 24	+ cm3/1000 str. +: 30.0 + Shutoff solenoid
	+ Volt : 24
MECHANICAL SHUTOFF	+
	T ACCEMBLY AND ADJUCTMENT DIMENSCIONS
Rated speed rpm : 1050	+ ASSEMBLY AND ADJUSTMENT DIMENSIONS
Del. quantity	+
Del. quantity cm3/1000 strokes : 1.5	+ Dimension KF mm : 5,2
Del. quantity	+
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance	Dimension KF:mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5	Dimension KF mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid	Dimension KF:mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5	Dimension KF:mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. + : 1.5 Check tolerance cm3/1000s. + : 1.5 Shutoff solenoid	Dimension KF:mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt : 24 ELECTR. SHUTOFF	Dimension KF mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2 SVS dimension mm : 1,6
Del. quantity cm3/1000 strokes : 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt : 24	Dimension KF:mm : 5,2 Tolerance mm + : 0,2 Dimension MS mm : 1,0 Tolerance mm + : 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5 Tolerance	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever
Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance cm3/1000s. +: 1.5 Shutoff solenoid Volt: 24 ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP Rated speed rpm: 375 Del. quantity cm3/1000 strokes: 1.5 Tolerance cm3/1000 str. +: 1.5 Check tolerance	Dimension KF:mm : 5,2 Tolerance mm +: 0,2 Dimension MS mm : 1,0 Tolerance mm +: 0,2 SVS dimension mm : 1,6 CONTROL LEVER POSITION SET Control lever position YA mm : 34,838,8 Control lever

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.08.96 Test oil : ISO 4113

Part no. : 3 916 922

Pump designation: VE6/12F1150R381-7B

Customer-spec. information Customer : CUMMINS

Motor : 68T- 5.9 IND.

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

inier press. bar : 0.35 Tolerance bar + : 0.05

Test nozzle holde

assembly : 1 688 901 027

Opening pressure

bar : 250 Tolerance bar + : 3

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter: 2.00 x Length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,5

Tolerance mm +: 0.02(0.06)

Outlet : D

Prestroke

(as of UT) mm : 0,3 Tolerance mm + : 0,02

Check

tolerance mm +: 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 750

Setting mm : 3.6
Tolerance mm +-: 0.5
Shutoff solenoid
Volt : 24

SUPPLY PUMP PRESSURE

Rated speed rpm : 750

Supply pomo

pressure bar : 4.0 Tolerance bar + : 0.3

Shutoff solenoid

Volt : 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 75.5

Tolerance

cm3/1000 str. + : 1.5

Spread

cm3/1000 strokes : 4.0

Shutoff solenoid

Volt : 24

IDLE SETTING

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 str. + : 3.0

Shutoff solenoid

Volt : 24

Spread

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 7.0

FULL-LOAD SPEED REGULATION

Nel muchikk.	į.
Del. quantity cm3/1000 strokes : 55.0	Rated speed rpm : 1050
Tolerance	+ Overflow quantity
cm3/1000 str. +-: 3.0	+ ccm/10s : 97.2
Shutoff solenoid	+ Tolerance
Volt : 24	+ ccm/10s + : 41.6
	+
STARTING FUEL DELIVERY	+ Check tolerance
	+ ccm/10s + : 41.6
Rated speed rpm : 100	+ Shutoff solenoid
Del. quantity	+ Volt : 24
cm3/1000 strokes : 90.0 Tolerance	Rated speed rpm : 500
cm3/1000 str. +-: 30.0	<pre>+ Rated speed rpm : 500 + Overflow quantity</pre>
Shutoff solenoid	+ ccm/10s : 62.5
Volt : 24	Tolerance
	+ ccm/10s +-: 20.8
	+ Check tolerance
	+ ccm/10s + : 20.8
	+ Shutoff solenoid
INJECTION—PUMP TEST SPECIFICATIONS	+ Volt : 24
	+
TIMING DEVICE CHARACTERISTIC	DELIVERY AND BREAKAWAY CHARACTERISTIC
Dated aread and 4050	Detect annual annual 1150
Rated speed rpm : 1050	+ Rated speed rpm : 1150
SV travel mm : 5.2	+ Del. quantity + cm3/1000 strokes : 55.0
Tolerance ma +: 0.5	+ Tolerance
Check	+ cm3/1000 str. + : 3.0
tolerance mm + : 0.7	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. + : 6.0
Volt : 24	+ Shutoff solenoid
	+ Volt : 24
Rated speed rpm : 500	+
A 5	+ Rated speed rpm : 1130
SV travel mm : 1.7	+ Del. quantity
Tolerance mm +: 0.6	+ cm3/1000 strokes : 30.0
Check tolerance mm ←: 0.7	+ Check tolerance + cm3/1000s. +: 15.0
tolerance mm +-: 0.7 Shutoff solenoid	+ Shutoff solenoid
Volt : 24	Volt : 24
SUPPLY PUMP PRESSURE CHARACTERISTIC	Rated speed rpm : 1200
	+ Del. quantity
Rated speed rpm : 1050	+ cm3/1000 strokes : 1.5
Supply pomp	+ Tolerance
pressure bar : 5.2	+ cm3/1000 str. +: 1.5
Tolerance bar +: 0.3	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. +: 1.5
Volt : 24	+ Shutoff solenoid
Rated speed rpm : 500	† Volt : 24
Rated speed rpm : 500 Supply pomp	Rated speed rpm : 1050
pressure bar : 2.9	+ Del. quantity
Tolerance bar +: 0.3	- cm3/1000 strokes : 72.5
Shutoff solenoid	+ Tolerance
Volt : 24	+ cm3/1000 str. +: 1.5
	+ Check tolerance
OVERFLOW QUANTITY	+ cm3/1000s. $+$: 3.0

Shutoff solenoid Volt : 24	‡
Rated speed rpm : 500 Del. quantity	<u> </u>
cm3/1000 strokes : 60.0 Tolerance	START TRANSITION
cm3/1000 str. +-: 4.0 Check tolerance	
cm3/1000s. +-: 6.0 Shutoff solenoid	
Volt : 24	Tolerance - cm3/1000 str. +-: 15.0
Rated speed rpm : 750 Del. quantity	Shutoff solenoid Volt : 24
um3/1000 strokes : 75.5 Tolerance	
cm3/1000 str. +: 1.5 Check tolerance	Rated speed rpm : 130 Del. quantity
cm3/1000s. +-: 3.0 Shutoff solenoid	cm3/1000 strokes : 100.0 Tolerance
Volt : 24	+ cm3/1000 str. + : 30.0 + Shutoff solenoid
MECHANICAL SHUTOFF	
Rated speed rpm : 1050	ASSEMBLY AND ADJUSTMENT DIMENSIONS
Del. quantity cm3/1000 strokes : 1.5 Tolerance	Dimension KF mm : 5,2 Tolerance mm +-: 0,2
cm3/1000 str. ←: 1.5 Check tolerance	
cm3/1000S. + : 1.5 Shutoff solenoid	SVS dimension mm : 1,6
Volt : 24	<u> </u>
ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP	CONTROL LEVER POSITION SET
Rated speed rpm : 375 Del. quantity	Control lever position YA mm : 34,838,8
cm3/1000 strokes : 1.5 Tolerance	Control lever
cm3/1000 str. +-: 1.5 Check tolerance	position YB mm : 40,746,3
cm3/1000s. ←: 1.5	
IDLE DELIVERY	End of test-specification sheet
Rated speed rpm : 450 Del. quantity	
cm3/1000 strokes : 2.0 Tolerance	‡
cm3/1000 str. + : 2.0 Check tolerance	<u> </u>
cm3/1000s. \leftarrow : 2.0 Shutoff solenoid	‡
Volt : 24	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.08.96 Test oil : ISO 4113

Part no. : 3 282 815

Pump designation : VE6/12F1050R381-7C

Customer-spec. information Customer : CUMMINS

: 6BT- 5.9 IND. Motor

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar + :

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 bar Tolerance bar +:

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter: 2,00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,5

Tolerance mm + : 0.02(0.06)

: D Outlet

Prestroke

(as of UT) mm : 0.3Tolerance mm + : 0.02

Check

tolerance mm +-: 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 750

3.6 Setting mm Tolerance mm 0.2 Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm : 750

Supply pomp

pressure bar 4.0 Tolerance bar + : 0.3

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

0.5

Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 73.5

Tolerance cm3/1000 str. + :

Spread

cm3/1000 strokes : 4.0

Shutoff solenoid

24 Volt

IDLE SETTING

Rated speed rpm : 535

Del. quantity

cm3/1000 strokes : 7.0

Tolerance

cm3/1000 str. + :3.0

Shutoff solenoid

Volt 24

Spread

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 7.0

FULL-LOAD SPEED REGULATION

	•
Del. quantity	†
cm3/1000 strokes : 49.5	+ Rated speed rpm : 1050
Tolerance	+ Overflow quantity
cm3/1000 str. +-: 3.0	+ ccm/10s : 97.2
Shutoff solenoid	+ Tolerance
Volt : 24	+ ccm/10s +: 41.6
	†
STARTING FUEL DELIVERY	+ Check tolerance
D	+ ccm/10s +-: 41.6
Rated speed rpm : 100	+ Shutoff solenoid
Del. quantity	+ Volt : 24
cm3/1000 strokes : 90.0	†
Tolerance	Rated speed rpm : 500
cm3/1000 str. +-: 30.0	+ Overflow quantity
Shutoff solenoid	+ ccm/10s : 62.5
Volt : 24	+ Tolerance
	+ ccm/10s +: 20.8
	+ Check tolerance
	+ ccm/10s +: 20.8
THIRCTION WHID TEST COPOLETONIC	+ Shutoff solenoid
INJECTION-PUMP TEST SPECIFICATIONS	+ Volt : 24
TIMING DEVICE CHARACTERISTIC	DEL THERY AND DECAMALIAN CHARACTERISTIC
ITHING DEVICE CHARACTERISTIC	† DELIVERY AND BREAKAWAY CHARACTERISTIC
Rated speed rpm : 1050	Rated speed rpm : 1150
nated speed (pill . 1000	+ Del. quantity
SV travel mm : 5.4	+ cm3/1000 strokes : 49.5
Tolerance mm +-: 0.4	+ Tolerance
Check	+ cm3/1000 str. + : 3.0
tolerance mm + : 0.7	+ Check tolerance
Shutoff solenoid	- cm3/1090s. +-: 6.0
Volt : 24	+ Shutoff solenoid
, 24	+ Volt : 24
Rated speed rpm : 500	1
11000 opcour pin 1 200	Rated speed rpm : 1170
SV travel mm : 1.7	+ Del. quantity
Tolerance mm +: 0.4	+ cm3/1000 strokes : 30.0
Check	+ Check tolerance
tolerance mm +: 0.7	+ cm3/1000s. +-: 15.0
Shutoff solenoid	+ Shutoff solenoid
Volt : 24	+ Volt : 24
	+
SUPPLY PUMP PRESSURE CHARACTERISTIC	+ Rated speed rpm : 1230
	+ Del. quantity
Rated speed rpm : 1050	+ cm3/1000 strokes : 1.5
Supply pomp	+ Tolerance
pressure bar : 5.2	+ cm3/1000 str. +-: 1.5
Tolerance bar +-: 0.3	+ Check tolerance
Shutoff solenoid	+ cm3/1000s. +-: 1.5
Volt : 24	+ Shutoff solenoid
	+ Volt : 24
Rated speed rpm : 500	†
Supply pomp	+ Rated speed rpm : 1050
pressure bar : 2.9	+ Del. quantity
Tolerance bar +: 0.3	+ cm3/1000 strokes : 70.5
Shutoff solenoid	+ Tolerance
Volt : 24	+ cm3/1000 str. ←: 1.5
	+ Check tolerance
OVERFLOW QUANTITY	+ cm3/1000s. + : 3.0

Chimade astanced		1
Shutoff solenoid Volt	: 24	Rated speed rpm : 450
Rated speed rpm Del. quantity	: 900	Del. quantity cm3/1000 strokes : 2.0
cm3/1000 strokes Tolerance	: 73.5	+ Tolerance + cm3/1000 str. +-: 2.0 + Check tolerance
cm3/1000 str. +- Check tolerance	: 2.0	cm3/1000s. +-: 2.0 Shutoff solenoid
cm3/1000s. +- Shutoff solenoid	: 4.0	Volt : 24
Volt	: 24	
Rated speed rpm Del. quantity	: 500	
cm3/1000 strokes	: 58.0	START TRANSITION
cm3/1000 str. +- Check tolerance	: 4.0	Rated speed rpm : 240
cm3/1000s. +- Shutoff solenoid	: 6.0	Del. quantity - cm3/1000 strokes : 45.0
Volt	: 24	+ Tolerance + cm3/1000 str. +-: 15.0
Rated speed rpm Del. quantity		+ Shutoff solenoid + Volt : 24
cm3/1000 strokes Tolerance		+
cm3/1000 str. +- Check tolerance		+ Rated speed rpm : 130 + Del. quantity
cm3/1000s. +- Shutoff solenoid		+ cm3/1000 strokes : 100.0 + Tolerance
Volt	: 24	+ cm3/1000 str. +-: 30.0 + Shutoff solenoid
MECHANICAL SHUTOF	F	+ Volt : 24
Rated speed rpm Del. quantity	: 1050	ASSEMBLY AND ADJUSTMENT DIMENSIONS
cm3/1000 strokes Tolerance	: 1.5	Dimension KF mm : 5,2 Tolerance mm + : 0,2
cm3/1000 str. +- Check tolerance	: 1.5	Dimension MS mm : 1.0 Tolerance mm + : 0.2
cm3/1000s. +- Shutoff solenoid		SVS dimension mm : 1,6
Volt	: 24	‡
ELECTR. SHUTOFF CONTROL LEVER, IDE	LE STOP	CONTROL LEVER POSITION SET
Rated speed rpm	: 530	Control lever
Del. quantity cm3/1000 strokes Tolerance	: 1.5	position YA mm : 34,838,8 Control lever
cm3/1000 str. +- Check tolerance	: 1.5	position YB mm : 40,746,3
cm3/1000s. +-	: 1.5	
IDLE DELIVERY		End of test-specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.96 Edition Test oil : ISO 4113

: 0 460 424 078 Part no. Pump designation: VE4/12F1100R389-2

Customer-spec. information

Customer : CDC

Motor : 4 BT- 390 AUTOM.

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar + :

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 bar Tolerance bar + :

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Tolerance mm + : 0.02(0.06)

Outlet : A

Prestroke

(as of UT) mm : 0,3 Tolerance mm +-:0.02

Check

+- : 0,04 tolerance mm

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

1000 hPa

Setting mm 5.3 Tolerance mm 0.5

Shutoff solenoid

24 Volt

SUPPLY PUMP PRESSURE

Rated speed rpm 900

Aneroid pressure

hPa 1000

Shutoff solenoid

Volt 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 750

Aneroid pressure

1000 hPa

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 str. + :1.5

Spread

cm3/1000 strokes :

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 70.5

Tolerance

cm3/1000 str. + :3.5

Shutoff solenoid

Volt

24

Check tolerance

cm3/1000s.4.5

IDLE SETTING

Rated speed rpm : 425

Del, quantity com3/1000 strokes : 12.0 tolerance mm → : 0.7 Shutoff solenoid com3/1000 strokes : 12.0 tolerance mm → : 0.7 Shutoff solenoid volt : 24 SUPPLY PUMP PRESSURE CHARACTERISTIC Solenoid volt solenoid com3/1000 strokes : 5.5 Rated speed rpm : 1050 Ameroid pressure hPa com3/1000 strokes : 5.5 Rated speed rpm : 1050 Ameroid pressure bPa com3/1000 strokes : 7.0 Pressure bPa com3/1000 strokes : 5.5 Rated speed rpm : 1000 Supply pomp pressure bPa com3/1000 strokes : 6.6 Tolerance bar → : 0.3 Shutoff solenoid volt com3/1000 strokes : 58.0 Supply pomp pressure bPa com3/1000 strokes : 58.0 Supply pomp pressure bPa com3/1000 strokes : 58.0 Supply pomp pressure bPa com3/1000 strokes : 5.0 Supply pomp pressure bPa com3/1000 strokes : 5.0 Supply pomp pressure bPa com3/1000 strokes : 24 Starring Fuel Delivery Ameroid pressure bPa com3/1000 strokes : 100.0 Ameroid pressure bPa com3/1000 strokes : 100.0 Ameroid pressure bPa com3/1000 strokes : 100.0 Supply pomp press		
Tolerance cm3/1000 str. + : 4.0	Del. quantity	+ Check
cm3/1000 str. + : 4.0 4.0 Shutoff solenoid 24 Spread 24 Cm3/1000 strokes : 5.5 Rated speed rpm : 1050 Check tolerance 7.0 cm3/1000 strokes : 7.0 Aneroid pressure FULL-LOAD SPEED REGULATION Yott FULL-LOAD SPEED REGULATION Yott Rated speed rpm : 1145 Rated speed rpm : 750 Pressure has : 1000 Aneroid pressure has : 1000 Perssure has : 1000 Supply pomp pressure bar : 750 Analy pomp pressure bar : 750 Aneroid pressure has : 1000 Perssure has : 1000 Supply pomp pressure bar : 5.3 Tolerance cm3/1000 str. + : 5.0 Tolerance bar + : 0.3 Shutoff solenoid Yott Volt : 24 Rated speed rpm : 500 Rated speed rpm : 100 Pressure bar : 500 Pale pressure bar : 1000 Pressure bar : 1000 Polerance cm3/1000 str. + : 40.0 Shitoff solenoid Volt : 24 Volt : 24 Volt of solenoid Your in the pressure par : 10.3 Problemance cm3/1000 str : 40.0 Shitoff solenoid Volt in the p	cm3/1000 strokes : 12.0	+ tolerance mm $+$: 0.7
Shutoff solenoid 124 SUPPLY PUMP PRESSURE CHARACTERISTIC Spread 1050 Supply pomp	Tolerance	+ Shutoff solenoid
Volt	cm3/1000 str. +-: 4.0	+ Volt : 24
Spread Check tolerance Cm3/1000 strokes 5.5 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000 Check toleranc	Shutoff solenoid	+
Spread Check tolerance Cm3/1000 strokes 5.5 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000s 7.0 Check tolerance Cm3/1000 Check toleranc	Volt : 24	SUPPLY PUMP PRESSURE CHARACTERISTIC
cm3/1000 strokes : 5.5 Aneroid pressure : 1000 Check tolerance cm3/1000s. : 7.0 Aneroid pressure : 1000 supply pomp pressure bar : 0.3 6.6 FULL-LOAD SPEED REGULATION Volt : 24 Rated speed rpm : 1145 Rated speed rpm : 750 Pressure ha : 1000 Aneroid pressure : 1000 Del. quantity cm3/1000 strokes : 58.0 Supply pomp pressure bar : 5.3 cm3/1000 str. ← : 5.0 Tolerance bar ← : 0.3 cm3/1000 str. ← : 5.0 Tolerance bar ← : 0.3 cm3/1000 str. ← : 5.0 Tolerance bar ← : 0.3 cm3/1000 str. ← : 40.0 Aneroid pressure in Pa : 1000 Volt volt : 24 Volt : 24 STARTING FUEL DELIVERY : Rated speed rpm : 1000 Aneroid pressure har : 0.3 Rated speed rpm : 100 Aneroid pressure bar : 4.2 rolerance : 0.3/1000 strokes : 100.0 Aneroid pressure bar : 0.3 rolerance : 0.3/1000 strokes : 100.0 Dole : 4.2 rolerance : 0.3/1000 strokes : 100.0 Dole : 4.2 rolerance : 0.3/1000 strokes : 100.0 Dole : 4.2 rolerance : 0.3/100 strokes : 100.0 Dole : 4.2 rolerance : 0.3/100 strokes : 100.0 Dole : 4.2		
Check tolerance cm3/1000S. : 7.0 Aneroid pressure hPa : 1000 Supply pomp pressure bar pressure bar folerance bar + : 0.3 : 6.6 : 0.3 FULL-LOAD SPEED REGULATION 24 Rated speed rpm : 1145 Rated speed rpm : 750 Pressure hPa : 1000 Aneroid pressure hPa : 1000 bel. quantity Supply pomp cm3/1000 strokes : 58.0 Supply pomp Tolerance bar + : 5.0 Tolerance bar + : 0.3 Shutoff solenoid Volt : 24 Volt quantity Rated speed rpm : 500 cm3/1000 strokes : 100.0 Pressure bar + : 1000 Pated speed rpm : 100 Pate pressure hPa : 1000 Pol. quantity Supply pomp cm3/1000 strokes : 100.0 Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 Tolerance Pressure bar : 4.2 <		+ Rated speed row · 1050
cm3/1000s. : 7.0 hPa Supply pomp pressure bar shutoff soleroid : 6.6 FULL-LOAD SPEED REGULATION Volt rolerance bar + : 0.3 : 0.6 FULL-LOAD SPEED REGULATION Volt rolerance bar + : 0.3 : 24 Rated speed rpm : 1145 Rated speed rpm : 750 Aneroid pressure hPa : 1000 Pelsure hPa : 1000 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 5.3 : 5.3 Tolerance cm3/1000 str. + : 5.0 Tolerance bar + : 0.3 Shutoff soleroid volt : 24 Volt soleroid volt : 24 Volt rolerance bar + : 0.3 Shutoff soleroid volt : 24 STARTING FUEL DELIVERY Rated speed rpm : 500 Aneroid pressure hPa : 1000 Pel. quantity cm3/1000 strokes : 100.0 pressure bar : 0.3 Shutoff soleroid volt : 24 Volt solerance cm3/1000 strokes : 100.0 pressure bar : 0.3 Shutoff soleroid volt : 24 Volt solerance cm3/100 strokes : 100.0 pressure bar : 0.3 Shutoff soleroid volt : 24 Volt solerance part : 24 OVERFLOW QUANTITY Rated speed rpm : 500 Check tolerance ccm/10s + : 20.8 Aneroid pressure hPa : 1000 Check tolerance ccm/10s + : 20.8 Shutoff soleroid volt : 24 Volt : 24 SV travel mm : 6.6		
Supply pomp Pressure bar		
Pressure bar		
FULL-LOAD SPEED REGULATION FULL-LOAD SPEED REGULATION Rated speed rpm : 1145 Pressure hPa : 1000 Pel. quantity cm3/1000 strokes : 58.0 Tolerance bar +: 0.3 Supply pomp pressure bar : 5.3 Shutoff solenoid Volt : 24 STARTING FUEL DELIVERY Rated speed rpm : 100 Pel. quantity cm3/1000 str. +: 5.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Pel. quantity cm3/1000 strokes : 100.0 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 STARTING FUEL DELIVERY Rated speed rpm : 100 Pel. quantity cm3/1000 strokes : 100.0 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 OVERFLOW QUANTITY Rated speed rpm : 500 Aneroid pressure hPa : 1000 Voerflow quantity ccm/10s +: 20.8 Tolerance ccm/10s +: 20.8 Shutoff solenoid Volt : 24 SV travel mm : 6.6 Tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Check tolerance ccm/10s +: 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Check tolerance ccm/10s +: 20.8 Shutoff solenoid Volt : 24 Tolerance bar +: 1100 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 20.8 Shutoff solenoid Volt : 24 Tolerance bar +: 1100 Check tolerance ccm/10s +: 20.8 Tolerance bar +: 1100 Check tolerance ccm/10s +: 20.8 Tolerance bar +: 1100 Check tolerance ccm/10s +: 20.8 Tolerance bar +: 1100 Overflow quantity ccm/10s +: 20.8 Tolerance bar +: 1100 Overflow quantity ccm/10s +: 20.8 Tolerance bar +: 1100 Overflow quantity ccm/10s +: 20.8 Tolerance bar +: 1100 Overflow quantity ccm/10s +: 20.8 Tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24 Tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24 Tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24		
Shutoff solenoid Shutoff sol		
## FULL-LOAD SPEED REGULATION		
Rated speed rpm : 1145 Pressure hPa : 1000 Pressure hPa : 1000 Salphy pomp Del. quantity Cm3/1000 strokes : 58.0 Tolerance Cm3/1000 strokes : 58.0 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity Cm3/1000 strokes : 100.0 Tolerance Cm3/1000 strokes : 1000 Tolerance Cmm/10s +: 20.8 Tolerance Cmm/10s TIMING DEVICE CHARACTERISTIC Check tolerance Ccm/10s Tolerance Ccm/10s	FIRE LALOAN CREEN RECHEATION	
Pressure hPa	FOLL-LOAD SPEED REGULATION	† voit : 24
Pressure hPa	Dated speed see . 11/5	Dated aread area 350
Del quantity Cm3/1000 strokes : 58.0 Supply pomp Supply pomp Pressure bar 5.3 Tolerance Cm3/1000 str. +: 5.0 Tolerance bar +: 0.3 Shutoff solenoid Yolt 24 Yolt 24 Yolt 24 Yolt 24 Yolt 24 Yolt 24 Yolt 24 Yolt 25 Yolt 25 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 26 Yolt 27 Yolt		
cm3/1000 strokes : 58.0 Supply pomp pressure bar : 5.3 molerance bar +: 0.3 shutoff solenoid volt : 24 5.3 molerance bar +: 0.3 shutoff solenoid volt : 24 STARTING FUEL DELIVERY Rated speed rom : 500 Aneroid pressure hPa : 1000 bel. quantity cm/100 strokes : 100.0 Rated speed rom : 500 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.2 Tolerance cm3/1000 strokes : 100.0 Tolerance bar +: 0.3 Shutoff solenoid volt : 24 Volt : 24 Volt : 24 Volt : 24 INJECTION-PUMP TEST SPECIFICATIONS Tolerance cm/10s +: 20.8 TIMING DEVICE CHARACTERISTIC Check tolerance cm/10s +: 20.8 Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity cm/10s +: 24 SV travel mm : 6.6 Folerance mm +: 0.5 Check tolerance mm +: 0.5 Check tolerance cm/10s +: 24 Rated speed rpm : 1000 Overflow quantity cm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Aneroid pressure hPa : 1000 Shutoff solenoid Volt : 24 Check tolerance cm/10s +: 41.6 SV travel mm : 4.2 500 Aneroid pressure hPa : 1000 Shutoff solenoid Volt : 24		
Tolerance cm3/1000 str. + : 5.0		
cm3/1000 str. +: 5.0 Tolerance bar +: 0.3 Shutoff solenoid Volt : 24 Shutoff solenoid Volt : 24 STARTING FUEL DELIVERY Rated speed rom : 500 Rated speed rpm : 100 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 100.0 Supply pomp pressure bar : 4.2 Tolerance cm3/1000 str: 40.0 Shutoff solenoid Volt : 24 Volt : 24 OVERFLOW QUANTITY Rated speed rpm : 500 Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +: 20.8 TIMINECTION-PUMP TEST SPECIFICATIONS Tolerance ccm/10s +: 20.8 TIMING DEVICE CHARACTERISTIC Check tolerance ccm/10s +: 20.8 Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Shutoff solenoid Volt : 24 SV travel mm : 6.6 Tolerance mm +: 0.5 Aneroid pressure hPa : 1000 Aneroid pressure hPa : 1000 Volt for a cm/10s : 24 Tolerance ccm/10s : 97.2 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Nutroff solenoid Volt : 24 Shutoff solenoid Volt : 24		
Shutoff solenoid Yolt : 24		
Volt		
Rated speed rpm : 100		
Aneroid pressure hPa	Volt : 24	† Volt : 24
Aneroid pressure hPa		+
Rated speed rpm : 100 Del. quantity cm.3/1000 strokes : 100.0 Tolerance cm.3/1600 str. + : 40.0 Shutoff solenoid Volt : 24 INJECTION-PUMP TEST SPECIFICATIONS TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Supply pomp pressure bar : 4.2 Tolerance bar + : 0.3 Shutoff solenoid Volt : 24 OVERFLOW QUANTITY Rated speed rpm : 500 Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 1000 Aneroid pressure hPa : 1000 Aneroid pressure hPa : 1000 Aneroid pressure hPa : 1000 Aneroid pressure hPa : 1000 Check tolerance ccm/10s + : 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 24 SV travel mm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s + : 41.6 Shutoff solenoid Volt : 24	STARTING FUEL DELIVERY	· · · · · · · · · · · · · · · · · · ·
Del. quantity cm3/1000 strokes : 100.0 Tolerance cm3/1000 str.		
Cm3/1000 strokes : 100.0	Rated speed rpm : 100	+ hPa : 1000
Tolerance cm3/1000 str. ÷ : 40.0 Shutoff solenoid Volt : 24 Volt : 24 OVERFLOW QUANTITY Rated speed rpm : 500 Overflow quantity ccm/10s : 20.8 TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Ccm/10s + : 20.8 Aneroid pressure hPa : 1000 Volt : 24 SV travel mm : 6.6 Rated speed rpm : 1100 Aneroid pressure tolerance mm + : 0.5 Aneroid pressure hPa : 10.7 Shutoff solenoid Volt : 24 Volt : 24 Rated speed rpm : 1000 Ccm/10s + : 20.8 Rated speed rpm : 1000 Ccm/10s + : 20.8 Rated speed rpm : 1000 Ccm/10s + : 24 SV travel mm + : 0.7 Overflow quantity ccm/10s : 97.2 Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s + : 41.6 Rated speed rpm : 500 Check tolerance ccm/10s + : 41.6 Rated speed rpm : 500 Check tolerance ccm/10s + : 41.6 SV travel mm : 4.2 Volt : 24		+ Supply pomp
Shutoff solenoid Shutoff solenoid Volt : 24	cm3/1 000 strokes : 100.0	+ pressure bar : 4.2
Shutoff solenoid Volt	Tolerance	+ Tolerance bar +-: 0.3
Volt	cm3/1600 str. ← : 40.0	+ Shutoff solenoid
OVERFLOW QUANTITY Rated speed rom : 500 Overflow quantity ccm/10s : 62.5 TOLerance ccm/10s +: 20.8 TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Rated speed rpm : 1100 Rated speed rpm : 1100 Check tolerance ccm/10s +: 20.8 Shutoff solenoid Volt : 24 SV travel mm +: 0.5 Check hPa : 1000 Overflow quantity cm/10s : 97.2 Tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 SV travel mm : 4.2	Shutoff solenoid	+ Volt : 24
Rated speed rom : 500 Overflow quantity ccm/10s : 62.5	Volt : 24	+
Overflow quantity ccm/10s : 62.5		+ OVERFLOW QUANTITY
Overflow quantity ccm/10s : 62.5		+
Ccm/10s		Rated speed rom : 500
INJECTION-PUMP TEST SPECIFICATIONS Timing Device Characteristic Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Rated speed rpm : 1100 Aneroid pressure Check tolerance mm +: 0.5 Aneroid pressure hPa : 1000 Rated speed rpm : 1100 Aneroid pressure ccm/10s : 24 Tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24		+ Overflow quantity
INJECTION-PUMP TEST SPECIFICATIONS Timing Device Characteristic Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Rated speed rpm : 1000 Rated speed rpm : 1000 Tolerance mm +: 0.5 Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 1000 Check tolerance mm +: 0.7 Rated speed rpm : 500 Aneroid pressure ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24		+ ccm/10s : 62.5
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050	INJECTION-PUMP TEST SPECIFICATIONS	
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050		+ ccm/10s + : 20.8
Rated speed rpm : 1050 <	TIMING DEVICE CHARACTERISTIC	+
Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +: 0.5 Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Shutoff solenoid SV travel mm : 4.2		+ Check tolerance
Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +: 0.5 Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Shutoff solenoid SV travel mm : 4.2	Rated speed rpm : 1050	+ ccm/10s + : 20.8
hPa : 1000 + 24 SV travel mm : 6.6 - Rated speed rpm : 1100 Tolerance mm + : 0.5 - Aneroid pressure - hPa : 1000 tolerance mm + : 0.7 - Overflow quantity : 97.2 Shutoff solenoid : 24 - Tolerance - ccm/10s + : 41.6 Rated speed rpm : 500 - Check tolerance - cm/10s + : 41.6 Shutoff solenoid Shutoff solenoid Volt : 24		+ Shutoff solenoid
SV travel mm : 6.6 Tolerance mm +: 0.5 Check		
Tolerance mm +: 0.5 Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid SV travel mm : 4.2 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24		+
Tolerance mm +: 0.5 Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid SV travel mm : 4.2 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24	SV travel mm : 6.6	Rated speed rom : 1100
Check tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 Check tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid SV travel mm : 4.2 Volt : 24		
tolerance mm +: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000 SV travel mm : 4.2 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s +: 41.6 Check tolerance ccm/10s +: 41.6 Shutoff solenoid Volt : 24		
Shutoff solenoid ccm/10s 97.2 Volt 24 Tolerance ccm/10s + : 41.6 Rated speed rpm 500 Aneroid pressure Check tolerance hPa : 1000 SV travel mm : 4.2 Com/10s + : 41.6 Shutoff solenoid Volt : 24		
Volt : 24		
Rated speed rpm : 500 Aneroid pressure hPa : 1000		
Rated speed rpm : 500 Aneroid pressure hPa : 1000		
Aneroid pressure hPa : 1000 + ccm/10s + : 41.6 Shutoff solenoid Volt : 24	Rated speed rpm : 500	1
hPa : 1000 + ccm/10s +- : 41.6 Shutoff solenoid SV travel mm : 4.2 + Volt : 24		1 Check tolerance
SV travel mm : 4.2 + Shutoff solenoid : 24		
SV travel mm : 4.2 + Volt : 24		1
· · · · · · · · · · · · · · · · · · ·	SV travel mm : 4.2	
		1
		ı

		1
DELIVERY AND BREAKAW	AY CHARACTERISTIC	Rated speed rpm : 750 Aneroid pressure
Rated speed rpm : Aneroid pressure	1145	hPa : 1000 Del. quantity
hPa : Del. quantity	1000	cm3/1000 strokes : 81.0 Tolerance
cm3/1000 strokes : Tolerance	58.0	- cm3/1000 str. +: 1.5 - Check tolerance
cm3/1000 str. + : Check tolerance	5.0	- cm3/1000s. + : 3.0 - Shutoff solenoid
cm3/1000s. +: Shutoff solenoid	6.0	Volt : 24
Volt :	24	MECHANICAL SHUTOFF
Rated speed rpm : Aneroid pressure	1120	Rated speed rpm : 1050
hPa : Del. quantity	1000	+ Aneroid pressure + hPa : 1000
cm3/1000 strokes : Check tolerance	35.0	Del. quantity cm3/1000 strokes : 1.5
cm3/1000s. +: Shutoff solenoid	20.0	+ Tolerance + cm3/1000 str. +-: 1.5
Volt :	24	+ Check tolerance cm3/1000s. +-: 1.5
Rated speed rpm : Aneroid pressure	1200	+ Shutoff solenoid + Volt : 24
hPa : Del. quantity	1000	
cm3/1000 strokes : Tolerance	1.5	+ ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
cm3/1000 str. + : Check tolerance	1.5	Rated speed rpm : 425
cm3/1000S. +-: Shutoff solenoid	1.5	Del. quantity cm3/1000 strokes : 1.5
Voit :	24 700	+ Tolerance + cm3/1000 str. + : 1.5 + Check tolerance
Rated speed rpm : Aneroid pressure	430	cm3/1000s. +-: 1.5
hPa : Del. quantity cm3/1000 strokes :	77.5	IDLE DELIVERY
Tolerance cm3/1000 str. + :	3.0	Rated speed rpm : 475
Check tolerance cm3/1000s. +:	4.0	Del. quantity cm3/1000 strokes : 2.0
Shutoff solenoid Volt	24	Tolerance cm3/1000 str. +: 2.0
Rated speed rpm :	1100	Check tolerance cm3/1000s. +: 2.0
Aneroid pressure hPa :	1000	+ Shutoff solenoid + Volt : 24
Del. quantity cm3/1000 strokes :	73.0	‡
Tolerance cm3/1000 str. +-:	2.5	‡
Check tolerance cm3/1000s. +-:	1.5	+
Shutoff solenoid Volt :	24	+ START TRANSITION +

Rated speed rpm : 230 Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 str. +: 20.0

Shutoff solenoid

24 Volt

Rated speed rpm : 130

Del. quantity cm3/1000 strokes : 100.0

Tolerance

cm3/1000 str. +: 40.0

Shutoff solenoid

24 Vclt

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm : 5,2 Tolerance mm ← : 0,2 Dimension MS mm : 1,2 Tolerance mm + : 0,2 SVS dimension mm : 2,5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.08.96 Edition Test oil : ISO 4113

: 3 283 378 Part no.

Pump designation: VE4/12F1150R389-2B

Customer-spec, information

Customer : CDC

Motor : 4 BT- 390 AUTOM.

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar +-:

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 Tolerance bar +-:

: 1 680 750 000 Test lines

Outside diameter : 6.00

2.00 x inside diameter : x Length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Tolerance mm +: 0.02(0.06)

Outlet : A

Prestroke

(as of UT) mm : 0.3Tolerance mm + : 0,02

Check

tolerance mm +-: 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

1000

3.6 Setting mm Tolerance mm +-: 0.2

Shutoff solenoid

Volt 12

SUPPLY PUMP PRESSURE

Rated speed rpm 900

Aneroid pressure

1000

Shutoff sclencid

12 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 1100

Aneroid pressure

hPa 1000

Del. quantity

cm3/1000 strokes : 67.5

Tolerance

cm3/1000 str. +-: 0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 12

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 48.0

Tolerance

cm3/1000 str. +-: 0.5

Shutoff solenoid

12

Check tolerance

cm3/1000s.

4.5

IDLE SETTING

Rated speed rpm : 360

Del. quantity	+ Check
cm3/1000 strokes : 17.0	tolerance mm + : 0.7
Tolerance	+ Shutoff solenoid
cm3/1000 str. + : 3.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	† Volt : 12
Shutoff solenoid	†
Volt : 12	+ SUPPLY PUMP PRESSURE CHARACTERISTIC
Spread	+
cm3/1000 strokes : 5.5	+ Rated speed rpm : 1050
Check tolerance	+ Aneroid pressure
cm3/1000s. : 7.0	+ hPa : 1000
	Supply pomp
	pressure bar : 6.6
	Tolerance bar +: 0.3
	+ Shutoff solenoid
FULL-LOAD SPEED REGULATION	+ Volt : 12
	+
Rated speed rpm : 1150	+ Rated speed rpm : 750
Pressure hPa : 1000	+ Aneroid pressure
Del. quantity	+ hPa : 1000
cm3/1000 strokes : 57.0	+ Supply pomp
Tolerance	pressure bar : 5.3
cm3/1000 str. + : 3.0	Tolerance bar +: 0.3
Shutoff solenoid	
	+ Shutoff solenoid
Volt : 12	+ Volt : 12
	†
STARTING FUEL DELIVERY	+ Rated speed rpm : 500
	+ Aneroid pressure
Rated speed rpm : 100	+ hPa : 1000
Del. quantity	+ Supply pomp
cm3/1000 strokes : 100.0	+ pressure bar : 4.2
Tolerance	+ Tolerance bar + : 0.3
$c_0 3/1000 \text{ str.} + : 40.0$	Shutoff solenoid
Shutoff solenoid	Volt : 12
Volt : 12	. 12
VOCC	OVERFLOW QUANTITY
	T OVERPLOW QUARTITY
	T Dated and James 500
	+ Rated speed rpm : 500
	+ Cverflow quantity
	+ ccm/10s : 62.5
INJECTION-PUMP TEST SPECIFICATIONS	+ Tolerance
	+
TIMING DEVICE CHARACTERISTIC	+
	+ Check tolerance
Rated speed rpm : 1050	+ ccm/10s + : 20.8
Aneroid pressure	+ Shutoff solenoid
hPa : 1000	+ Volt : 12
SV travel mm : 5.1	DELIVERY AND BREAKAWAY CHARACTERISTIC
Tolerance mm +: 0.4	The state of the s
Check	Rated speed rpm : 1150
tolerance mm + : 0.7	Aneroid pressure
Shutoff solenoid	+ hPa : 1000
Volt : 12	+ Del. quantity
	+ cm3/1000 strokes : 57.0
Rated speed rpm : 500	Tolerance
Aneroid pressure	+ cm3/1000 str. +-: 3.0
hPa : 1000	+ Check tolerance
	+ cm3/1000s. $+$: 6.0
SV travel mm : 2.1	+ Shutoff solenoid
Tolerance mm + : 0.4	+ Volt : 12
and the second control of the second control	

	+	Shutoff solenoid
Rated speed rpm : Aneroid pressure	1120	volt : 12
hPa :	1000	CLECTO CHUTOCC
Del. quantity cm3/1000 strokes : Check tolerance	35.0	ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
cm3/1000s. +-: Shutoff solenoid	20.0	Rated speed rpm : 360 Del. quantity
Volt :	12	cm3/1000 strokes : 1.5 Tolerance
Rated speed rpm : Aneroid pressure	1200	cm3/1000 str. +-: 1.5 Check tolerance
hPa : Del. quantity	1000	cm3/1000s. +-: 1.5
cm3/1000 strokes : Tolerance	1.5	· IDLE DELIVERY
cm3/1000 str. +-: Check tolerance	1.5	Rated speed rpm : 420
cm3/1000S. +: Shutoff solenoid	1.5	Del. quantity cm3/1000 strokes : 2.0
Volt :	12	Tolerance cm3/1000 str. +-: 2.0
Rated speed rpm : Aneroid pressure	500	Check tolerance cm3/1000s. +-: 2.0
hPe : Del. quantity	365	Shutoff solenoid Volt : 12
cm3/1000 strokes : Tolerance	63.0	. 12
cm3/1000 str. +-: Check tolerance	0.5	
cm3/1000s. +-: Shutoff solenoid	4.0	
Volt :	12	START TRANSITION
Rated speed rpm : Ameroid pressure	1100	Rated speed rpm : 230 Del. quantity
hPa : Del. quantity	1000	cm3/1000 strokes : 40.0 Tolerance
cm3/1000 strokes : Tolerance	67.5	cm3/1000 str. +-: 20.0 Shutoff solenoid
cm3/1000 str. +-: Check tolerance	C.5	Volt : 12
cm3/1000s. + : Shutoff solenoid	3.0	Rated speed rpm : 130
Volt :	12	Del. quantity cm3/1000 strokes : 100.0
MECHANICAL SHUTOFF		Tolerance cm3/1000 str. +-: 40.0
Rated speed rpm :	1150	Shutoff solenoid Volt : 12
Aneroid pressure	1000	
Del. quantity cm3/1000 strokes :	1.5	ASSEMBLY AND ADJUSTMENT DIMENSIONS
Tolerance cm3/1000 str. +-:	1.5	Dimension KF mm : 5,2 Tolerance mm +-: 0,2
Check tolerance cm3/1000S. +-:	1.5	Dimension MS mm : 1,2 Tolerance mm +-: 0,2
	1.5	SVS dimension mm : 2,5

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever position YB mm : 42,3..47,8

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.08.96 : ISO 4113 Test oil

: 3 282 734 Part no.

Pump designation: VE4/12F1100R389-20

Customer-spec. information

Customer : CDC

Motor : 4 BT- 390 AUTOM.

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar +-:

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

Tolerance bar +-:

: 1 680 750 000 Test lines

Curside diameter : 6.00

x inside diameter : 2.00 x length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Tolerance mm +: 0.02(0.06)

: A Outlet

Prestroke

(as of UT) mm : 0,3 Tolerance mm +-:0.02

Check

tolerance mm +: 0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

hPa 1000

5.3 Setting mm Tolerance mm + : 0.5

Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 900

Aneroid pressure

hPa 1000

Shutoff solenoid

Volt 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 750

Aneroid pressure

1000

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 str. +: 1.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

70.5 cm3/1000 strokes :

Tolerance

cm3/1000 str. + :3.5

Shutoff solenoid

Volt

24

Check tolerance

cm3/1000s. 4.5

IDLE SETTING

Rated speed rpm : 425

Del. quantity	+ Check
cm3/1000 strokes : 12.0	tolerance mm + : 0.7
Tolerance	+ Shutoff solenoid
cm3/1000 str. + : 3.0	+ Volt : 24
Shutoff solenoid	+
Volt : 24	+ SUPPLY PUMP PRESSURE CHARACTERISTIC
Spread	+
cm3/1000 strokes : 5.5	+ Rated speed rpm : 1050
Check tolerance	+ Aneroid pressure
cm3/1000s. : 7.0	+ hPa : 1000
	+ Supply pomp
	pressure bar : 6.6
	Tolerance bar +-: 0.3
	Shutoff solenoid
FULL-LOAD SPEED REGULATION	+ Volt : 24
TOLE COMP OF ELD TILLIBRIES	1
Rated speed rpm : 1145	Rated speed rpm : 750
Pressure hPa : 1000	Aneroid pressure
Del. quantity	hPa : 1000
cm3/1000 strokes : 58.0	Supply pomp
Tolerance	+ pressure bar : 5.3
cm3/1000 str. +-: 5.0	
Shutoff solenoid	
	+ Shutoff solenoid
Volt : 24	+ Volt : 24
OTANTING CUEL NELTHERY	Data di anno di anno di FOO
STARTING FUEL DELIVERY	Rated speed rpm : 500
8 And an 1 and 400	+ Aneroid pressure
Rated speed rpm : 100	† hPa : 1000
Del. quantity	+ Supply pomp
cm3/1000 strokes : 100.0	pressure bar : 4.2
Tolerance	+ Tolerance bar + : 0.3
cm3/1000 str. + : 40.0	+ Shutoff solenoid
Shutoff salenoid	+ Volt : 24
Volt : 24	†
	+ OVERFLOW QUANTITY
	+
	+ Rated speed rpm : 500
	+ Overflow quantity
	+ Overflow quantity + ccm/10s : 62.5
INJECTION-PUMP TEST SPECIFICATIONS	+ Overflow quantity + ccm/10s : 62.5 + Tolerance
	+ Overflow quantity + ccm/10s : 62.5
INJECTION-PUMP TEST SPECIFICATIONS TIMING DEVICE CHARACTERISTIC	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8
TIMING DEVICE CHARACTERISTIC	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8 Check tolerance
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +-: 0.5 Check	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +-: 0.5 Check tolerance mm +-: 0.7	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +-: 0.5 Check tolerance mm +-: 0.7	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8 Check tolerance ccm/10s +-: 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8 Check tolerance ccm/10s +-: 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8 Check tolerance ccm/10s +-: 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s +-: 20.8 Check tolerance ccm/10s +-: 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s + : 41.6
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm +-: 0.5 Check tolerance mm +-: 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s + : 41.6 Check tolerance
Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid
TIMING DEVICE CHARACTERISTIC Rated speed rpm : 1050 Aneroid pressure hPa : 1000 SV travel mm : 6.6 Tolerance mm + : 0.5 Check tolerance mm + : 0.7 Shutoff solenoid Volt : 24 Rated speed rpm : 500 Aneroid pressure hPa : 1000	Overflow quantity ccm/10s : 62.5 Tolerance ccm/10s + : 20.8 Check tolerance ccm/10s + : 20.8 Shutoff solenoid Volt : 24 Rated speed rpm : 1100 Aneroid pressure hPa : 1000 Overflow quantity ccm/10s : 97.2 Tolerance ccm/10s + : 41.6 Check tolerance ccm/10s + : 41.6 Shutoff solenoid

		ı
DELIVERY AND BREAKAN	AY CHARACTERISTIC	Rated speed rpm : 750 Aneroid pressure
Rated speed rpm : Aneroid pressure	1145	hPa : 1000 Del. quantity
hPa : Del. quantity	1000	cm3/1000 strokes : 81.0 Tolerance
cm3/1000 strokes : Tolerance	58.0	cm3/1000 str. +-: 1.5 Check tolerance
cm3/1000 str. +-: Check tolerance	5.0	- cm3/1000s. +-: 3.0 - Shutoff solenoid
cm3/1000s. +-: Shutoff solenoid	6.0	Volt : 24
Volt :	24	MECHANICAL SHUTOFF
Rated speed rpm :	1120	+
Aneroid pressure hPa :	1000	+ Rated speed rpm : 1050 + Aneroid pressure
Del. quantity cm3/1000 strokes :	35.0	† hPa : 1000 † Del. quantity
Check tolerance cm3/1000s. +:	20.0	+ cm3/1000 strokes : 1.5 + Tolerance
Shutoff solenoid Volt :	24	+ cm3/1000 str. + : 1.5 + Check tolerance
Rated speed rpm :	1260	+ cm3/1000s. +-: 1.5 + Shutoff solenoid
Aneroid pressure hPa :	1000	+ Volt : 24
Del. quantity cm3/1000 strokes :	1.5	ELECTR. SHUTOFF
Tolerence cm3/1000 str. +-:	1.5	+ CONTROL LEVER, IDLE STOP
Check tolerance cm3/1000s. +:	1.5	+ Rated speed rpm : 425 + Del. quantity
Shutoff solenoid Volt :	24	tom3/1000 strokes : 1.5 Tolerance
Rated speed rpm :	700	+ cm3/1000 str. + : 1.5 + Check tolerance
Aneroid pressure hPa :	430	+ cm3/1000s. +-: 1.5
Del. quantity cm3/1000 strokes :	77.5	† IDLE DELIVERY
Tolerance cm3/1000 str. +-: Check tolerance	3.0	Rated speed rpm : 475 Del. quantity
cm3/1000s. +-: Shutoff solenoid	4.0	+ cm3/1000 strokes : 2.0 + Tolerance
Volt :	24	- cm3/1000 str. + : 2.0 - Check tolerance
Rated speed rpm : Aneroid pressure	1100	cm3/1000s. +: 2.0 Shutoff solenoid
hPa : Del. quantity	1000	Volt : 24
cm3/1000 strokes : Tolerance	73.0	
cm3/1000 str. +-:	2.5	Ţ
Check tolerance cm3/1000s. +-:	3.0	CTADT TDANICITION
Shutoff solenoid Volt :	24	+ START TRANSITION

Rated speed rpm 230 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 str. +-: 20.0 Shutoff solenoid Volt 24 Rated speed rpm : 130 Del. quantity cm3/1000 strokes : 100.0

Tolerance cm3/1000 str. +-: 40.0

Shurorf solenoid Volt :

ASSEMBLY AND ADJUSTMENT DIMENSIONS

24

Dimension KF mm : 5,2
Tolerance mm + : 0,2
Dimension MS mm : 1,2
Tolerance mm + : 0,2
SVS dimension mm : 2,5

CONTROL LEVER POSITION SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mn : 42,2..47,8

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.08.96 Edition Test oil : ISO 4113

Part no. : 3 282 732

Pump designation : VE4/12F1050R389-2D

Customer-spec. information

: CDC Customer

: 4 BT- 390 AUTOM. Motor

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar + :

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

250 bar Tolerance bar +-: 3

: 1 680 750 000 Test lines

Outside diameter : 6.00

x inside diameter : 2.00 840 x length mm

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Toterance mm \leftarrow : 0,02(0,06)

Outlet : A

Prestroke

(as of UT) mm : 0.3Tolerance mm +-: 0,02

Check

tolerance mm +-:0.04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

1000 hPa

3.6 Setting mm 0.2 Tolerance mm +:

Shutoff solenoid

Volt 12

SUPPLY PUMP PRESSURE

900 Rated speed rpm :

Aneroid pressure

1000

Shutoff solenoid

Volt 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

750 Rated speed rpm :

Aneroid pressure

1000

Del. quantity

cm3/1000 strokes : 72.8

Tolerance

cm3/1000 str. +-: 0.5

Spread

cm3/1000 strokes :

Check tolerance

cm3/1000s. 4.5

Shutoff solenoid

Volt 12

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 70.5

Tolerance

cm3/1000 str. +-:0.5

Shutoff solenoid

12

Check tolerance

cm3/1000s. 4.5

IDLE SETTING

375 Rated speed rpm :

Del. quantity	+ Check
cm3/1000 strokes : 11.0	tolerance mm +-: 0.7
Tolerance	† Shutoff solenoid
cm3/1000 str. + : 3.0	+ Volt : 12
Shutoff solenoid	+
Volt : 12	→ SUPPLY PUMP PRESSURE CHARACTERISTIC
Spread	+
cm3/1000 strokes : 5.5	Rated speed rpm : 1050
Check tolerance	+ Aneroid pressure
cm3/1000s. : 7.0	hPa : 1000
	- Supply pomp
	pressure bar : 6.6
	Tolerance bar +: 0.3
	Shutoff solenoid
ERRILLIOAN COCCU DECLUATION	
FULL-LOAD SPEED REGULATION	† Volt : 12
Dotted around non 11/5	T Detail aread area . 750
Rated speed rpm : 1145	Rated speed rpm : 750
Pressure hPa : 1000	Aneroid pressure
Del. quantity	† hPa : 1000
cm3/1000 strokes : 58.0	+ Supply pomp
Tolerance	+ pressure bar : 5.3
cm3/1000 str. + : 3.0	† Tolerance bar ++: 0.3
Shutoff solenoid	+ Shutoff solenoid
Volt : 12	† Volt : 12
	+
STARTING FUEL DELIVERY	+ Rated speed rpm : 500
	+ Aneroid pressure
Rated speed rpm : 100	+ hPa : 1000
Del. quantity	+ Supply pomp
cm3/1000 strokes : 100.0	pressure bar : 4.2
Tolerance	+ Tolerance bar +: G.3
cm3/1000 str. +-: 40.0	+ Shutoff solenoid
Shutoff solenoid	+ Volt : 12
Volt : 12	1
1011	- OVERFLOW QUANTITY
	T OASIW GOWNIII
	Rated speed rpm : 500
	+ Overflow quantity
INJECTION-PUMP TEST SPECIFICATIO	
TRACCITOR FORF TEST SECURITION TO	- ccm/10s +: 20.8
TIMING DEVICE CHARACTERISTIC	
ITHING DEATCE CHANGE LEVISITE	Check tolerance
Rated speed rpm : 1050	- ccm/10s + : 20.8
Aneroid pressure	Shutoff solenoid
· ·	Volt : 12
hPa : 1000	7 4011 : 12
Old demonstrate to E.A.	T Dated aread are 1 1050
SV travel mm : 5.1	+ Rated speed rpm : 1050
Tolerance mm +: 0.4	Aneroid pressure
Check	+ hPa : 1000
tolerance mm +: 0.7	+ Overflow quantity
Shutoff solenoid	ccm/10s : 97.2
Volt : 12	† Tolerance
500	+ ccm/10s + : 41.6
Rated speed rpm : 500	†
Aneroid pressure	+ Check tolerance
hPa : 1000	+ ccm/10s +: 41.6
	+ Shutoff solenoid
SV travel mm : 2.1	+ Volt : 12
Tolerance mm + : 0.4	+

	+
DELIVERY AND BREAKAWAY CHARACTERISTIC	Rated speed rpm : 900 Aneroid pressure
Rated speed rpm : 1145 ≟∵eroid pressure	hPa : 1000 Del. quantity
Del. quantity	cm3/1000 strokes : 83.5
cm3/1000 strokes : 58.0	+ cm3/1000 str. $+$: 4.0
Tolerance cm3/1000 str. +-: 3.0 Check tolerance	Shutoff solenoid : 12
cm3/1000s. + : 6.0 Shutoff solenoid	Rated speed rpm : 750 Aneroid pressure
Volt : 12	+ hPa : 1000
Rated speed rpm : 1120 Aneroid pressure	- Del. quantity - cm3/1000 strokes : 72.8 - Tolerance
hPa : 1000 Del. quantity	cm3/1000 str. +: 0.5 Check tolerance
cm3/1000 strokes : 35.0 Check tolerance	cm3/1000s. +: 3.0 Shutoff solenoid
cm3/1000s. +-: 20.0 Shutoff solenoid	Volt : 12
Volt : 12	MECHANICAL SHUTOFF
Rated speed rpm : 1180	+
Aneroid pressure hPa : 1000	Rated speed rpm : 1050 Aneroid pressure
Del. quantity cm3/1000 strokes : 1.5	hPa : 1000 Del. quantity
Tolerence cm3/1000 str. ←: 1.5	cm3/1000 strokes : 1.5 Tolerance
Check tolerance cm3/1000S. +-: 1.5 Shutoff solenoid	- cm3/1000 str. + : 1.5 - Check tolerance - cm3/1000s. + : 1.5
Volt : 12	+ cm3/1000s. +: 1.5 + Shutoff solenoid + Volt : 12
Rated speed rpm : 700 Aneroid pressure	
hPa : 430 Del. quantity	ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
cm3/1000 strokes : 77.5 Tolerance	Rated speed rpm : 375
cm3/1000 str. + : 0.5 Check tolerance	Del. quantity cm3/1000 strokes : 1.5
cm3/1000s. +-: 4.0 Shutoff solenoid	Tolerance - cm3/1000 str. + : 1.5
Volt : 12	- Check tolerance - cm3/1000s. +-: 1.5
Rated speed rpm : 1050 Aneroid pressure	‡
hPa : 1000 Del. quantity	IDLE DELIVERY
cm3/1000 strokes : 78.0 Tolerance	Rated speed rpm : 450 Del. quantity
cm3/1000 str. +: 1.5 Check tolerance	- cm3/1000 strokes : 2.0 Tolerance
cm3/1000s. +: 3.0 Shutoff solenoid	- cm3/1000 str. +-: 2.0 - Check tolerance
Volt : 12	+ cm3/1000s. +-: 2.0

Shutoff solenoid

Volt : 12

START TRANSITION

Rated speed rpm : 230

Del. quantity cm3/1000 strokes : 40.0

Tolerance

cm3/1000 str. + : 20.0

Shutoff solenoid

Volt : 12

Rated speed rpm : 130

Del. quentity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 str. + : 40.0

Shutoff solenoid

Volt : 12

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm : 5,2
Tolerance mm : 0,2
Dimension MS mm : 1,2
Tolerance mm : 0,2

SVS dimension mm : 2,5

CONTROL LEVER POSITION

SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 42,2..47,8

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.08.96 Edition : ISO 4113 Test oil

: 3 917 517 Part no.

Pump designation : VE4/12F1050R389-2E

Customer-spec. information

Customer

: CDC

: 4 BT- 390 AUTOM. Motor

TEST BENCH REQUIREMENTS

Overflow

restriction mm : 0.55

Inlet press. bar : 0.35 Tolerance bar +-: 0.05

Test nozzle holde

: 1 688 901 027 assembly

Opening pressure

Tolerance bar +-:

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00 x Length mm 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm: 1,55

Tolerance mm +: 0.02(0.06)

Outlet : A

Prestroke

(as of UT) mm : 0,3 Tolerance mm +-: 0,02

Check

tolerance mm +-: 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm 750

Aneroid pressure

hPa 1000

3.6 Setting mm Tolerance mm + : 0.2

Shutoff solenoid

Volt 24

SUPPLY PUMP PRESSURE

Rated speed rpm 900

Aneroid pressure

1000

Shutoff soleroid

24 Volt

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 1100

Aneroid pressure

hPa 1000 Del. quantity

cm3/1000 strokes : 72.8

Tolerance

cm3/1000 str. + :0.5

Spread

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. 4.5

Shutoff soleroid

Volt 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes :

70.5

Tolerance

cm3/1000 str. + :0.5

Shutoff solenoid

Volt 24

Check tolerance

cm3/1000s.

4.5

IDLE SETTING

Del. quantity	44.0	†	Check	
cm3/1000 strokes	: 11.0	†	tolerance mm + : 0.7	
Tolerance	7.0	+	Shutoff solenoid	
cm3/1000 str. +	: 3.0	†	Volt : 24	
Shutoff solenoid		†		
Volt	: 24	+	SUPPLY PUMP PRESSURE CHARACTERIST	LIC
Spread		+	4050	
cm3/1000 strokes	: 5.5	+	Rated speed rpm : 1050	
Check tolerance	7.0	+	Aneroid pressure	
cm3/1000s.	: 7.0	†	hPa : 1000	
		†	Supply pomp	
		†	pressure bar : 6.6	
		†	Tolerance bar +: 0.3	
FILL 1045 SSEED D	DOLU ATTOM	†	Shutoff solenoid	
FULL-LOAD SPEED R	EGULATION	1	Volt : 24	
Date to a set on	AAIF	†	2.1	
Rated speed rpm	: 1145	†	Rated speed rpm : 750	
Pressure hPa	: 1000	1	Aneroid pressure	
Del. quantity	. 59.0	Ť	hPa : 1000	
cm3/1000 strokes	: 58.0	†	Supply pomp	
Tolerance cm3/1000 str. +-	: 3.0	1	pressure bar : 5.3 Tolerance bar + : 0.3	
Shutoff solenoid	: 3.0	Ť		
Volt	: 24	Ţ	Shutoff solenoid Volt : 24	
VOCE	. 24	I	VOLU : 24	
STARTING FUEL DEL	IVEDY	Ţ	Rated speed rom : 500	
STARTING TOEL DEL	LVERI	I	Aneroid pressure	
Rated speed rpm	: 100	1	hPa : 1000	
Del. quantity	. ,00	1	Supply pomp	
cm3/1000 strokes	: 100.0	1	pressure bar : 4.2	
Tolerance		1	Tolerance bar + : 0.3	
cm3/1000 str. +	: 40.0	1	Shurcoff solenoid	
Shutoff solenoid	•	1	Volt : 24	
Volt	: 24	+		
		+	OVERFLOW QUANTITY	
		+		
		†	Rated speed rpm : 500	
		+	Overflow quantity	
		+	ccm/10s : 62.5	
INJECTION-PUMP TE	ST SPECIFICATIONS	+	Tolerance	
		†	ccm/10s + : 20.8	
TIMING DEVICE CHA	RACTERISTIC	Ť	Charle to Lamoure	
Dated appeal are	: 1050	Ť	Check tolerance ccm/10s + : 20.8	
Rated speed rpm Aneroid pressure	: 1050	I	ccm/10s + : 20.8 Shutoff solenoid	
hPa	: 1000	I	Volt : 24	
III	. 1000	I	vott . 24	
SV travel mm	: 5.1	I	Rated speed rpm : 1050	
Tolerance mm +	0.4	1	Aneroid pressure	
Check		1	hPa : 1000	
tolerance mm +	: 0.7	1	Overflow quantity	
Shutoff solenoid		1	ccm/10s : 97.2	
Volt	: 24	+	Tolerance	
	-	+	ccm/10s +: 41.6	
Rated speed rpm	: 500	+		
Aneroid pressure		+	Check tolerance	
hPa	: 1000	+	ccm/10s +-: 41.6	
		+	Shutoff solenoid	
SV travel mm	: 2.1	+	Volt : 24	
Tolerance mm +-	: 0.4	+		

		1
DELIVERY AND BREA	KAWAY CHARACTERISTIC	Rated speed rpm : 900 Aneroid pressure
Rated speed rpm Aneroid pressure	: 1145	+ hPa : 1000 - Del. quantity
nPa Del. quantity	: 1000	cm3/1000 strokes : 83.5 Tolerance
m3/1000 strokes	: 58.0	cm3/1000 str. +-: 4.0 Shutoff solenoid
:m3/1000 str. +- Check tolerance	3.0	Volt : 24
cm3/1000s. + Shutoff solenoid	: 6.0	Rated speed rpm : 1100 Aneroid pressure
olt	: 24	hPa : 1000 Del. quantity
Rated speed rpm Aneroid pressure	: 1120	cm3/1000 strokes : 72.8
nPa Xel. quantity	: 1000	cm3/1000 str. +: 0.5 Check tolerance
m3/1000 strokes	: 35.0	cm3/1000s. +-: 3.0 Shutoff solenoid
cm3/1000s. +- Shutoff solenoid	: 20.0	Volt : 24
/olt	: 24	MECHANICAL SHUTOFF
Rated speed rpm Aneroid pressure	: 1180	Rated speed rpm : 1050
nPa Del. quantity	: 1000	Aneroid pressure hPa : 1000
cm3/1000 strokes	: 1.5	Del. quantity cm3/1000 strokes : 1.5
cm3/1000 str. +-	1.5	Tolerance cm3/1000 str. +: 1.5
cm3/1000s. + Shutoff solenoid	1.5	Check tolerance cm3/1000s. +: 1.5
olt	: 24	Shutoff solenoid Volt : 24
Rated speed rpm Aneroid pressure	: 500	
Pa Pel. quantity	: 430	ELECTR. SHUTOFF CONTROL LEVER, IDLE STOP
cm3/1000 strokes Tolerance	: 77.5	Rated speed rpm : 375
cm3/1000 str. + Check tolerance	: 0.5	Del. quantity cm3/1000 strokes : 1.5
cm3/1000s. +-	4.0	Tolerance + cm3/1000 str. +-: 1.5
olt	: 24	Check tolerance cm3/1000s. +: 1.5
Rated speed rpm Uneroid pressure	: 1050	
nerota pressure Pa Pel. quantity	: 1000	IDLE DELIVERY
m3/1000 strokes Tolerance	: 78.0	Rated speed rpm : 450 Del. quantity
m3/1000 str. +	: 1.5	+ cm3/1000 strokes : 2.0 + Tolerance
Check tolerance	: 3.0	+ cm3/1000 str. +: 2.0
Shutoff solenoid Volt	: 24	+ Check tolerance + cm3/1000s. +-: 2.0

Shutoff solenoid

Volt : 24

START TRANSITION

Rated speed rpm : 230

Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 str. + : 20.0

Shutoff solenoid

Volt : 24

Rated speed rpm : 130

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 str. + : 40.0

Shutoff solenoid

Volt : 24

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm : 5,2
Tolerance mm + : 0,2
Dimension MS mm : 1,2
Tolerance mm + : 0,2
SVS dimension mm : 2,5

CONTROL LEVER POSITION

SET

Control lever

position YA mm : 34,8..38,8

Control lever

position YB mm : 41,3..47,8